

| EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment | | | | | | Work Assignment Number 02-13 | | | | |
|---|----------------|----------------------|---|----------------------------|---|---|------------------|---------|-------------------------|------------------|
| | | | | | | <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: | | | | |
| Contract Number EP-C-15-012 | | | Contract Period 08/01/2015 To 07/31/2018 Base Option Period Number 2 | | | Title of Work Assignment/SF Site Name Security Program Assess & Rev | | | | |
| Contractor CSRA LLC | | | | | Specify Section and paragraph of Contract SOW 2.1, 2.3, 2.4, 2.5, 2.14 | | | | | |
| Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval | | | | | | Period of Performance From 08/01/2017 To 07/31/2018 | | | | |
| Comments: In accordance with Clause B.1 immediate start is authorized for the subject work assignment. If the work plan is not approved within 35 days after receipt of the work plan the contractor shall stop work. | | | | | | | | | | |
| <input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund | | | | | | | | | | |
| SFO <input type="checkbox"/> (Max 2) Note: To report additional accounting and appropriations date use EPA Form 1900-69A. | | | | | | | | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| Authorized Work Assignment Ceiling | | | | | | | | | | |
| Contract Period: | | Cost/Fee: | | LOE: | | | | | | |
| 08/01/2015 To 07/31/2018 | | | | 0 | | | | | | |
| This Action: | | | | 1,350 | | | | | | |
| Total: | | | | 1,350 | | | | | | |
| Work Plan / Cost Estimate Approvals | | | | | | | | | | |
| Contractor WP Dated: | | | | Cost/Fee | | LOE: | | | | |
| Cumulative Approved: | | | | Cost/Fee | | LOE: | | | | |
| Work Assignment Manager Name Kenneth Stone | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: 513-569-7474 | | | | |
| | | | | | | FAX Number: | | | | |
| Project Officer Name Nancy Parrotta | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: 202-564-5260 | | | | |
| | | | | | | FAX Number: | | | | |
| Other Agency Official Name | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: | | | | |
| | | | | | | FAX Number: | | | | |
| Contracting Official Name Donna Reinhart | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: 513-487-2114 | | | | |
| | | | | | | FAX Number: | | | | |

PERFORMANCE WORK STATEMENT
CSRA EP-C-15-012
Work Assignment No. 02-13
Period of Performance: Effective date through July 31, 2018

I. ADMINISTRATIVE:

A. Title: Security Program Assessment & Review (SPAR)

**B. Work Assignment Contracting
Officer's Representative (WACOR):**

Kenneth R Stone
National Homeland Security Research
Center ORD (NG16)
26 Martin Luther King Blvd
Cincinnati, Ohio 45230
513-569-7474
stone.kenneth@epa.gov

Alternate WACOR:

Franz B Ott
Office of Administration & Resources
Management (253MLK)
26 Martin Luther King Blvd
Cincinnati, Ohio 45230
513-569-7171
ott.franz@epa.gov

C. Quality Assurance:

The tasks in this work assignment do not require environmental measurements. Consistent with the Agency's quality assurance (QA) requirements, the contractor does not need to supplement the Contract Level Quality Assurance Project Plan (QAPP) or to prepare a Project-Specific Quality Assurance project Plan (PQAPP).

D. Background:

The NHSRC is charged with handling and securing classified information. The purpose of the NHSRC INFOSEC program is to ensure that such information is quickly identified and controlled to prevent release to parties that may exploit it for harm to the American people. This mission is accomplished through the early identification of sensitive information under the RASP, the correct marking of such information for controlled utilization by researchers, partners and clients and the safeguarding at the appropriate level information that possesses the risk of harm to persons, programs, missions or National Security.

II. OBJECTIVE:

The purpose of this work assignment is to support the National Homeland Security Research Center's (NHSRC) Information Security (INFOSEC) program to ensure the security of NHSRC information.

To achieve this purpose the contractor shall be expected to: (1) provide services to conduct Risk Assessed Security Program (RASP) reviews of NHSRC research products to determine the sensitivity of information they contain; (2) make recommendations for designation as unclassified or unclassified/FOUO, as appropriate; (3) make recommendations for the classification of National Security Information (NSI), as appropriate (The contractor shall be

supplied with Agency classification guidance for this purpose.); (4) provide portion marking and classification justifications derived from Agency classification guidance; (5) support updates and revisions to classification guidance and provide guidance memoranda by project as directed.

This project supports programmatic support needs related to our national all hazards homeland security responsibilities by meeting NHSRC/ORD requirements under the Presidential Policy Directive/PPD-21, Critical Infrastructure Security and Resilience, and the Executive Order 13526, Classification of National Security Information.

This work will be completed commensurate with Sections 2.1, 2.3, 2.4, 2.5 and 2.14 of the Contract Level PWS. The level of effort estimated for this work assignment is 1,350 hours.

III. TASK DETAIL:

The contractor shall perform the following tasks:

Task 0 - Work Plan Submission:

The contractor shall develop a WP that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

In addition, the WP shall specify that a Supplemental Project Specific Quality Assurance Project Plan (SQAPP) appending the Contract Level QMP is not required.

In each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this work assignment, including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing WA under this contract is not occurring.

Deliverables: Work plan and monthly progress and financial reports.

Task 1 – Designated Review Authority

The contractor shall be designated as a review authority (DRA) for research products developed by the NHSRC. In this role, the contractor shall utilize the NHSRC Security Classification Guidance (SCG) provided by the EPA WACOR to assess the sensitivity of information in draft NHSRC products and provide a rating, along with a justification for any rating that entails a restriction in distribution or prohibition of release. Justifications must cite a legal requirement and be based on the SCG or other Federal classification guides issued by a cognizant authority. The types of products requiring a sensitivity review may include: articles

and papers, slide presentations, speeches, abstracts, brochures, reports, proceedings, computer tools and poster displays. Topical areas shall include:

- A) Threat evaluation and infrastructure vulnerability assessment and;
- B) Chemical and biological agent research, including, but not limited to;
 - i. Simulants and synthetic toxins
 - ii. Detection technology, assessment and evaluation
 - iii. Modeling and Dispersal
 - iv. Emergency Response Actions
 - v. Decontamination
 - vi. Disposal
- C) Radiological agent research, including, but not limited to;
 - vii. Detection technology, assessment and evaluation
 - viii. Modeling and Dispersal
 - ix. Emergency Response Actions
 - x. Decontamination
 - xi. Disposal

Documents submitted for review shall be uploaded to the Security Drop Box on the NHSRC Intranet by the EPA author or PI. Upon receiving automated notification of the upload, the contractor shall access the submission and conduct the security review, issue a rating and justification as indicated on the form and electronically sign the review.

NHSRC research products will be reviewed individually to determine the level of sensitivity, resulting in a recommendation to either *designate* the product, *Unclassified*, or *For Official Use Only (FOUO)*, or to *classify* it as *NSI*, *CONFIDENTIAL* or *SECRET*.

The contractor shall review and recommend designation or classification of research products in accordance with the guidance laid down in the NHSRC SCG. These products shall include abstracts, papers, articles, project summaries, reports, slides and slideshows, brochures, one-pagers, posters, computer products. Tasks will include the following:

Evaluating every component of a product in accordance with the requirements set down in EO 13596 and recommending designation or classification of the product to the NHSRC.

- (1) In the case of a recommendation of UNCLASSIFIED, the contractor shall simply make the recommendation and sign the review form without comment.
- (2) In the case of a FOUO (For Official Use Only), designation, the contractor shall page-mark the product in accordance with accepted practice, utilizing the markings stipulated in the SCG. The contractor shall cite the relevant topic in the draft manual, and provide an assessment of why the product fulfills the topic description.

- (3) In the case of a CONFIDENTIAL or SECRET classification recommendation, the contractor shall portion-mark the product in accordance with accepted practice, utilizing the portion-markings stipulated in the SCG. The contractor shall mark the cover of the document and the specific pages on which the information appears according to government requirements as temporary classification, pending NHSRC review and authorization. These markings shall also include the statement, "Classification Determination Pending," on the cover, title and all pages containing sensitive information.
- (4) The contractor shall deliver designation/classification recommendations and marked products to the NHSRC within 3 working days.

The DRA is a critical function as a failure to properly identify the potential National Security risk can lead to situations incurring significant civilian casualties.

In this security area, there is no room for compromise. Proper identification and assessment of risk for NHSRC research information enables NHSRC to quickly secure and control FOUO, CUI and NSI, preventing the release of such dangerous information to our adversaries. Should we fail to identify such information early in the research process, the cost incurred will be measured in lives lost, mission impacted and reputation damaged.

In sum, each individual provided by the contractor to act as a DRA must possess:

- (1) National Security Clearance at SECRET level or above,
- (2) Expertise in classifying NSI, and
- (3) Scientific knowledge to recognize the emergence of NSI in research efforts on chemical, biological and radiological attack agents.

Therefore, for each individual submitted for designation as a DRA, the contractor shall provide in the workplan a CV, resume or other record of work expertise that demonstrates all of the following:

1. Possession of a National Security Clearance at SECRET level or above
2. Expertise in the field of information classification, as either a derivative classification authority (DCA) or Original Classification Authority (OCA)
3. Expertise in threat evaluation and infrastructure vulnerability assessment
4. Expertise in these technical areas (either as a researcher or as a DCA or OCA):
 - i. Chemical and biological agents, including, but not limited to;
 - A) Chemical and biological simulants and synthetic toxins
 - B) Weaponizing agents and delivery methods

- C) Detection technology, assessment and evaluation
 - D) Modeling and Dispersal
 - E) Emergency Response Actions
 - F) Decontamination
 - G) Disposal
- ii. Radiological agent research, including, but not limited to;
 - H) Weaponizing agents and delivery methods
 - I) Detection technology, assessment and evaluation
 - J) Modeling and Dispersal
 - K) Emergency Response Actions
 - L) Decontamination
 - M) Disposal

Deliverables: RASP reviews, via Security Drop Box, for each product assigned, portion-marked products (as appropriate).

| Estimate Annual Number of Product Designation/Classification Reviews | |
|--|----|
| ABSTRACTS | 30 |
| PAPERS/ARTICLES | 30 |
| SLIDESHOWS | 40 |
| POSTERS | 15 |
| REPORTS/TEST PLANS | 50 |

Task 2 – NHSRC INFOSEC Program Support

The contractor shall support the planning, development and implementation of internal reviews, including classification, markings and assessments of the NHSRC INFOSEC program. These assessments will address any aspect of the INFOSEC program, as directed by the NHSRC Security Program through written technical direction. The contractor shall assist in planning sessions to assess operations and conduct walk-throughs of NHSRC sites to assist in the evaluation of security procedures. The contractor shall review classified inventory and assist in the cataloging, management, safeguarding and disposition of classified matter. As program changes are identified, the contractor shall assist in implementing those changes via documentary support.

It is envisioned that the contractor shall make two site visits to the Cincinnati office, NHSRC.

Deliverables: Program support activities, estimated annual requirement.

| Estimate Annual Number of Internal Reviews, Assessments and Inspections | |
|---|---|
| Internal Reviews | 1 |
| Assessments | 1 |

IV. SCHEDULE OF DELIVERABLES:

Specific deliverables, by Task, are detailed in the table below. All work will be determined by technical direction.

| TASK No. | DELIVERABLE | DATE DUE TO EPA |
|---|------------------------------|--|
| Task 0 - Workplan Submission | | |
| | Workplan and budget | According to contract |
| | Monthly progress reports | Monthly |
| Task 1 – Designated Review Authority | | |
| | RASP Reviews | 95% due same day. 5% due 3 days after issue. |
| Task 2 - NHSRC INFOSEC Program Support | | |
| | Internal Review & Assessment | Immediately upon completion |

V. MISCELLANEOUS:

Software Application Files and Accessibility:

Software application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

| | |
|--------------------------------|---|
| Preferred text format: | MS Word 8.0 or higher (Office 2007 or higher) |
| Preferred presentation format: | Power Point, Office 2007 or higher |
| Preferred graphics format: | Each graphic is an individual GIF file |
| Preferred portable format: | Adobe Acrobat, version 6.0 |

The EPA WACOR shall identify which of delivered products will require 508 compliance.

VI. TRAVEL

The contractor shall anticipate two (2) contractor trips to NHSRC in Cincinnati in support of this WA over the duration of the performance period. Travel will be directly related to the scope of this Work Assignment and support advancement of the work under Task 2.

VII. MEETINGS, CONFERENCES, TRAINING EVENTS, AWARD CEREMONIES AND RECEPTIONS

All appropriate clearances and approvals required by Agency policy in support of any and all conference related activities and expenses, including support of meetings, conferences, training events, award ceremonies and receptions, including the form 5170 for all meetings costing more than \$20,000, shall be obtained by the EPA CL-COR as needed and provided to the Contracting Officer (CO). Work under conference related activities and expenses shall not occur until this approval is obtained and provided by the EPA CL-COR.

VIII. CONTRACTOR IDENTIFICATION

Contractor personnel shall always identify themselves as contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative. The contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the CO, CL-COR and/or WACOR.

IX. PRINTING

All copying and printing shall be accomplished within the limitations of the printing clause of the contract.

X. Technical Direction

The Contract level COR or an authorized individual is permitted to provide technical direction. Technical direction must be within the statement of work of the contract and includes: (1) Direction to the contractor which assists the contractor in accomplishing the Statement of Work, (2) Comments on and approval of reports or other deliverables. Technical direction will be issued in writing or confirmed in writing within five (5) calendar days after verbal issuance. One copy of the technical direction memorandum will be forwarded to the Contracting Officer and the Contract Level Contracting Officer Representative.

XI. QUALITY ASSURANCE SURVEILLANCE PLAN:

All task(s) identified in the performance work statement above are subject to review and approval by the EPA WACOR based on the general guidelines of the contract quality assurance surveillance plan regarding: Programmatic, cost control, timeliness/deliverables, and document development standards.

| | | | | | | | | | | |
|---|----------------|----------------------|--|----------------------------|--|---|--|---------|-------------------------|------------------|
| EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment | | | | | | Work Assignment Number 02-14 | | | | |
| | | | | | | <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: | | | | |
| Contract Number EP-C-15-012 | | | Contract Period 08/01/2015 To 07/31/2018 Base Option Period Number 2 | | | Title of Work Assignment/SF Site Name Great Lakes Program Office Sup | | | | |
| Contractor CSRA LLC | | | | | Specify Section and paragraph of Contract SOW 2.0 | | | | | |
| Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval | | | | | | Period of Performance From 08/01/2017 To 07/31/2018 | | | | |
| Comments: In accordance with clause B.1 immediate start is authorized for this work assignment beginning on August 1, 2017. If the work plan is not approved within 35 calendar days after receipt of the work plan, the contractor shall stop work. | | | | | | | | | | |
| <input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund | | | | | | | | | | |
| SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2) | | | | | | | | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| Authorized Work Assignment Ceiling | | | | | | | | | | |
| Contract Period: Cost/Fee: LOE: 08/01/2015 To 07/31/2018 | | | | | | | | | | |
| This Action: | | | | | | | | | | |
| Total: | | | | | | | | | | |
| Work Plan / Cost Estimate Approvals | | | | | | | | | | |
| Contractor WP Dated: Cost/Fee LOE: | | | | | | | | | | |
| Cumulative Approved: Cost/Fee LOE: | | | | | | | | | | |
| Work Assignment Manager Name Louis Blume <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | | Branch/Mail Code: Phone Number: 312-353-2317 FAX Number: | | | |
| Project Officer Name Nancy Parrotta <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | | Branch/Mail Code: Phone Number: 202-564-5260 FAX Number: | | | |
| Other Agency Official Name <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | | Branch/Mail Code: Phone Number: FAX Number: | | | |
| Contracting Official Name Donna Reinhart <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | | Branch/Mail Code: Phone Number: 513-487-2114 FAX Number: | | | |

PERFORMANCE WORK STATEMENT
CSRA EP-C-15-012
Work Assignment No. 02-14
Period of Performance: 8/1/17-7/31/18

I. ADMINISTRATIVE:

A. Title: Support to EPA's Great Lakes National Program Office

B. Work Assignment Manager:
Louis Blume

Great Lakes National Program Office
(GLNPO)
77 West Jackson Boulevard (MC: G-9J)
Chicago, IL 60604
312-353-2317
blume.louis@epa.gov

Alternate Work Assignment Manager:
Eric Osantowski

Great Lakes National Program Office
(GLNPO)
77 West Jackson Boulevard (MC: G-9J)
Chicago, IL 60604
312-353-1373
osantowski.eric@epa.gov

Louis Blume serves as the WACOR and Dr. Eric Osantowski serves as the Alternate WACOR. There are 3 Task Managers including 1) Elizabeth Murphy for the Great Lakes Fish Monitoring and Surveillance Program, 2) Dr. Eric Osantowski for the Biology and Limnology Programs, and 3) Dr. Thomas Kevin O'Donnell for the Coastal Wetlands Monitoring Program. Technical Direction for all programs will be provided by the WACOR.

Contract PWS Paragraph: 2.0

C. Quality Assurance:

Tasks 1, 2, 3, 4, and 5 in this work assignment require quality assurance (QA). Collection, use and analysis of data will be identical to the procedures described in the Project-Specific Quality Assurance Project Plan (PQAPP) completed under tasks 1, 2, 3, 4, and 5 of WA 01-14, consistent with the Agency's Quality Assurance (QA) requirements, appending the Contract Quality Assurance Project Plan (QAPP). The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below.

D. Background:

The GLNPO was created in 1978 to fulfill the United States' obligation under the Great Lakes Water Quality Agreement with Canada. Since inception, additional responsibilities for GLNPO have been defined in Section 118 of the Clean Water Act, Section 112 of the Clean Air Act Amendments, and the Great Lakes Critical Programs Act of 1990. Within EPA, GLNPO is responsible for monitoring the condition of the waters of the Great Lakes and working to protect and restore the integrity of the nation's Great Lakes water resources, which serve as critical source waters for drinking water systems, and are a unique and symbolic national treasure that cross our national borders. GLNPO is a geographically-focused office, whose mission is to lead and coordinate United States efforts to protect and restore the Great Lakes. GLNPO's responsibilities include:

- Overseeing fulfillment of EPA's international commitments under the U.S.-Canada Great Lakes Water Quality Agreement
- Monitoring lake ecosystem indicators
- Managing and providing public access to Great Lakes data
- Helping communities address contaminated sediments in their harbors
- Supporting local protection and restoration of important habitats
- Promoting pollution prevention through activities and projects such as the U.S.-Canada Great Lakes Bi-national Toxics Strategy
- Providing assistance for community-based Remedial Action Plans for Areas of Concern and for Lake-wide Management Plans

GLNPO administers ongoing monitoring programs, conducts special studies to address new impacts of concern, implements sediment assessment and remediation activities, and is involved in several large scale cooperative studies. GLNPO assists Great Lakes partners (including federal, state, tribal, local, educational, and industry organizations) in these areas through technical assistance and coordination, as well as grants, interagency agreements, and contracts.

GLNPO has primary responsibility within the U.S. for conducting surveillance monitoring of the offshore waters of the Great Lakes. This monitoring is intended to fulfill provisions of the Great Lakes Water Quality Agreement (International Joint Commission, 1978) calling for periodic monitoring of the lakes to: 1) assess compliance with jurisdictional control requirements; 2) provide information on non-achievement of agreed-upon water quality objectives; 3) evaluate water quality trends over time; and 4) identify emerging problems in the Great Lakes Basin Ecosystem. GLNPO's base monitoring program involves semi-annual Water Quality Surveys of all five lakes to meet the surveillance monitoring requirements. Each summer GLNPO also conducts an intensive survey of dissolve oxygen (DO) concentrations in Lake Erie. GLNPO also oversees the Great Lakes Fish Monitoring Program to measure the contaminant levels of various organic substances in lake trout in the Great Lakes ecosystem. GLNPO has ongoing monitoring programs, conducts special studies to address new impacts of concern, and is involved in several large scale cooperative studies including a lake-wide pollutant modeling study, the Lake Michigan Mass Balance Study.

II. OBJECTIVE:

The purpose of this work assignment is to provide support to the U.S. Environmental Protection Agency's (EPA) Great Lakes National Program Office (GLNPO) in its efforts to: develop and implement GLNPO's Quality program; design, implement, interpret and report on environmental monitoring programs and special studies; and support its mission to lead and coordinate United States efforts to protect and restore the Great Lakes. The contractor shall provide quality management, scientific, data management, and technical support to review, plan, document, conduct, and report on environmental monitoring projects and other studies administered by GLNPO.

The contractor shall provide quality management, scientific, data management, modeling, and technical support to review, plan, document, conduct, interpret, track, and report on environmental monitoring projects and other studies for EPA review and decision.

The Contractor is tasked with supporting the design and implementation of environmental monitoring projects and other studies from the planning to the reporting stages. Contractor activities provide support to a variety of programs at GLNPO including the Great Lakes Fish Monitoring and Surveillance Program, the Water Quality Survey of the Great Lakes Limnology and Biology programs, the Coastal Wetland Monitoring Program, and the Information Management Program. Specifically, the contractor shall:

- Support implementation of GLNPO's Quality Management program including developing and implementing tools to inventory, track, assess, and report on project planning and quality documentation for GLNPO projects and reviewing and assessing the quality of environmental monitoring data
- Maintain and operate existing information management systems data management systems
- Research, evaluate, develop, and implement sampling and analysis procedures to support environmental monitoring projects
- Conduct statistical and geostatistical data analysis and interpretation and develop and apply environmental models including applying GIS and visualization tools to describe, evaluate, interpret, and present environmental conditions and information
- Develop, maintain, evaluate, refine and apply scientific models to assess, describe, and evaluate ecosystems while accounting for the sources, sinks, transport, fate, and effects of stressors, based upon the principle of conservation of mass, energy, and momentum
- Support model development and maintenance, debugging, compiling, database integration, systems integration and automation, model calibration, and integration with visualization and graphic presentation
- Calculate environmental metrics, such as total maximum daily loads, that facilitate assessment, evaluation, and interpretation of environmental data and environmental monitoring scenarios
- Develop, test, validate, archive and document revised and new models
- Use ecosystem scale modeling approaches to provide an integrated and synthetic picture of the system to facilitate establishment of regulatory and remedial priorities with both local and lake-wide perspectives
- Develop technical, quality assurance and scientific reports, web content, presentations, and outreach materials on environmental monitoring projects, programs, and other studies

- Provide scientific, technical, analytical, and administrative support for programmatic projects and initiatives; develop and implement tools for tracking, documenting, archiving, and presenting program information
- Coordinate, support, attend and present at meetings, workgroups, and conferences on environmental monitoring projects, modeling efforts, statistical analyses, quality management, and other aspects of environmental studies

All of the above general areas of support are to provide technical assistance to the EPA in their decision making process. The contractor shall further support EPA through the specific tasks described in detail under Section IV of this work assignment.

This work assignment provides quality management, scientific, data management, modeling, and technical support to review, plan, document, conduct, interpret, track, and report on environmental monitoring projects and other studies. The Great Lakes - Superior, Michigan, Huron, Erie, and Ontario - form the largest surface freshwater system on the Earth. More than 30 million people live in the Great Lakes basin, and the daily activities of these people, from the water consumed to the waste returned, directly affects the Great Lakes environment. This work assignment supports GLNPO activities in protecting and restoring the nation's drinking water, in being informed, coordinated and prepared to prevent, detect, respond to and recover from attacks and natural disasters. This work assignment also supports international commitments such as the bi-national waterway strategies with Canada.

In support of these requirements, this contract supports the nation's drinking and wastewater infrastructure, collectively known as the Water Sector, in being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attack and other intentional acts, natural disasters, and other hazards (referred to as the "all hazards" approach), which may also occur, including the needs and challenges posed by natural disasters, catastrophic events, adaptation and impacts of climate change, floods, earthquakes, pandemic illness, and any other events which impact the safety and availability of our water supply.

In pursuit of these efforts, the contractor may be tasked with preparing a correlation summary comparing the results under this work assignment to the components of the Water Security Strategy framework.

This work will be completed commensurate with Sections 3.2 and 3.4 of the Contract Level PWS.

III. TASK DETAIL:

The contractor shall perform the following tasks:

Task 0 - Work Plan, Progress evaluations, and Monthly Progress Reports

The contractor shall prepare a detailed work plan and budget for the accomplishment of the indicated tasks in accordance with the clause Work Assignments (EPAAR 1552.211-74). The

work plan shall include a description of (a) proposed staff, (b) the number of hours and labor classifications proposed for each task, broken down to task level, to include both prime contractor and subcontractor labor, and (c) a list of deliverables, with due dates and schedule for deliverables.

In addition, the work plan shall specify that a Supplemental Project Specific Quality Assurance Project Plan (SQAPP) appending the Contract Level Quality Assurance Project Plan (QAPP) or a Project-Specific Quality Assurance Project Plan (PQAPP) is not required.

In addition, the contractor shall prepare a statement indicating that this WA is a continuation of WA 1-14. This task also includes monthly progress and financial reports, which are to be submitted pursuant to Attachment 2 of the contract. Monthly financial reports must include a table with the invoice level of effort (LOE) and costs broken out by the tasks in this WA. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. The contractor shall immediately notify the EPA Contract Level Contracting Officer's representative (CLCOR) and EPA Work Assignment Contracting Officer's Representative (WACOR) if any changes to the collection and analysis of the data is needed and prepare a PQAPP accordingly.

The contractor shall immediately alert the EPA WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event (e.g., meeting or training). Those costs would include travel of prime and consultant personnel, planning and facilitation costs, audio/visual, and rental of venue costs. The EPA WACOR will prepare approval internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Deliverables: Work plan, revised versions of PQAPPs, monthly progress and financial reports.

Task 1 - Scientific, Statistical, Visualization, and Quality Assurance Support to EPA's Great Lakes National Program Office - Quality Management Support

The contractor shall support implementation of GLNPO's Quality Management program including developing and implementing tools to inventory, track, assess, and report on project planning and quality documentation for GLNPO projects as indicated by written technical direction provided by the WACOR. The contractor shall assist EPA with reviewing, evaluating, and implementing EPA Quality Policy directives, guidance documents and other supporting materials. The contractor shall provide quality management support to the Great Lakes Fish Monitoring and Surveillance Program, the Water Quality Survey of the Great Lakes, and the Great Lakes Legacy Act Program, as well as other environmental monitoring programs and special studies. The contractor shall provide quality support to plan, document, conduct, evaluate, and report on environmental monitoring programs. Specific activities include:

- Conduct literature searches in support of the design of monitoring programs, interpretation of study data, and development of QA assessment parameters including

data quality objectives

- Review and assess EPA Quality Policy initiatives, implementation and guidance materials
- Assist in the development and revision of quality system documentation
- Develop and implement procedures and checklists to review quality system documentation
- Develop and implement tools to inventory, track, assess, and report on project planning and quality documentation for GLNPO projects
- Provide standard reports on quality system documentation status for all GLNPO funded projects
- Evaluate sampling, analytical, and geospatial data reporting standards, data reporting forms, and supporting documentation
- Conduct data verification, data quality assessments, and data usability assessments and provide reports presenting the results of the reviews
- Develop, evaluate and implement statistical analyses in support of data quality assessments; create and maintain all supporting statistical programs
- Prepare QA reports for environmental monitoring and other study data
- Provide technical support for conducting on-site field or laboratory audits of EPA field contractors and contractor grantee laboratories and the laboratory aboard the *Research Vessel Lake Guardian*
- Provide technical and quality management support to review reports, journal articles, and related documents
- Provide general technical and quality assurance support to plan, document, and implement monitoring programs and other special studies

As directed by the EPA WACOR, the contractor shall assist EPA in conducting or coordinating peer reviews of program methodology, strategies, methods, and protocols or other products related to this work assignment task. When coordinating reviews of study plans, protocols, methods, or third-party data (e.g., journals, grey literature, non-EPA databases, etc.), the contractor shall focus on determining the applicability of plans to specific EPA needs and shall make any appropriate recommendations to the EPA WACOR concerning their use in present form or with suggested modifications. The contractor shall ensure that in-house reviews are performed by qualified staff, and shall contact the author(s) of the subject materials to obtain additional information or clarifications about the material when such information is necessary to render a complete review.

The contractor shall provide or coordinate independent review of program methodology, strategies, methods, and protocols or other products related to this work assignment task as provided by written technical direction from the EPA WACOR. The contractor shall ensure that these independent reviews are conducted by technically qualified, independent reviewers in accordance with EPA's policy on peer review as outlined in EPA's Science Policy Council Handbook on Peer Review. In this effort, the contractor may identify and consult with experts in the specific area of interest to EPA.

Deliverables: Quality system documentation reviews in standardized formats, standard reports on quality system documentation status for all GLNPO funded projects, monthly status reports

on quality system documentation, data quality assessment reports in standardized formats, audit checklists and other materials in support of field and laboratory audits, reports on field and laboratory audits, project-specific quality assurance reports, and technical support for conducting on-site field and laboratory audits. We estimate approximately 20-30 project level quality plan reviews along with 15-20 data package reviews. Specific details on expectations of reviews is defined above and in the specific work assignment quality documents (previously approved).

Task 2 - Information Management Support

The contractor shall maintain and operate existing information management systems to efficiently, securely, and systematically gather, store, and manipulate a variety of technical, environmental, statistical, scientific, quality, and laboratory information related to Great Lakes protection, characterization, evaluation, and remedial activities. The contractor shall assist EPA in planning and implementing information management systems based on detailed evaluation of existing systems, including expanding existing systems where appropriate. Please consider use of Agile Development approaches or methodology wherever applicable consistent with EPA's Office of Environmental Information (OEI) directives.

Specific activities include:

- Develop, document, and implement sampling, analytical, and geospatial data reporting standards, data reporting forms, and supporting documentation
- Maintain and operate existing information management systems
- Develop and implement standardized evaluation of data submittals against requirements of study databases and provide standard reports on results of the evaluation
- Convert hardcopy and electronic field and analytical data into complete electronic files compliant with specific data standards including the Great Lakes Environmental Database and the Great Lakes Sediment Database (GLSED)
- Update databases with incoming data and revised data submissions and track updates
- Assist with input, maintenance, retrieval, analysis, reporting, and reformatting/integration and normalization of environmental data from EPA databases

Deliverables: Maintenance and operation of existing information management systems; processing submitted data into EPA standard formats, such as the Great Lakes Environmental Database (GLEND) Standard; standard reports on data submission evaluation; providing assistance to GLNPO on uploading datasets so they are publicly available through agency CDX and WQX connections; assisting the GLNPO Great Lakes Fish Monitoring and Surveillance Program (GLFMSP) with database queries that allow easy access by GLNPO and GLRI associated scientists and maintains a historical version controlled record for eventual public dissemination; assist the GLNPO Open Lake Limnology Monitoring Program with database queries that allow easy access by GLNPO and GLRI associated scientists and maintains a historical version controlled record for eventual public dissemination.

Task 3: Sampling and Analytical Support

The contractor shall provide sampling, analytical, and technical support to plan, document, and implement environmental monitoring projects and other special studies. This support will include assistance and guidance in designing monitoring programs and studies to characterize the frequency and occurrence of chemical and biological contaminants. As necessary, the contractor also shall conduct evaluations of the scientific literature and consult with subject experts to identify candidate or alternate design strategies and assist EPA in developing a comprehensive understanding and definition of sampling and analysis goals (such as data quality objectives). The contractor shall assist EPA in the development of statistically based sampling designs to accomplish these goals. The contractor also shall assist EPA in coordinating and implementing sampling efforts. This support shall include the developing, assembling, and distributing sampling kits and providing technical support to field sampling teams and laboratory personnel as directed by the EPA WACOR. The contractor shall provide such support to meet the specific programmatic needs of the Great Lakes program, including coordinating laboratory analysis with laboratories operating under contracts or grants with either EPA or with state partners in the Great Lakes basin. This may include support for studies on water, fish, and sediments from the open lakes or tributaries, bays, lagoons, point sources, atmospheric and other vectors that flow into the lakes. In performing these activities, the contractor shall subcontract with qualified, experienced laboratories in accordance with all applicable EPA and Federal Acquisition Regulations, if necessary.

Provide support to GLNPO for program coordination, monitoring, evaluation, and execution. Specific activities include:

- Research, evaluate, develop, and implement sampling and analysis procedures to support environmental monitoring projects including all aspects of the Water Quality Survey and nearshore characterization using TRIAXUS towed undulator and associated instrumentation
- Develop, evaluate, and implement data quality objectives, statistical sampling designs, and systematic planning for data gathering and monitoring studies
- Provide general program coordination support such as contacting participants, maintaining communications with participants, resolving issues or discrepancies, etc.
- Coordinate sampling schedule with field sampling teams to ensure teams receive proper sampling kits and materials prior to field collection efforts
- Develop sampling kits for GLFMSP and other studies
- Coordinate laboratory analysis with laboratories operating under contracts or grants with either EPA or with state partners in the Great Lakes Basin
- Procure laboratory supplies
- Track supplies shipped to participant laboratories
- Coordinate with all parties and shipping companies, such as Federal Express, to ensure that proper shipping protocols are followed to avoid delays and holding time issues with samples
- Review preliminary data to identify any issues
- Address any issues that were observed during preliminary analyses
- Develop detailed study instructions and updates
- Track shipments to laboratories

- Provide ongoing daily technical support to laboratories
- Provide logistical support to participating laboratories
- Troubleshoot problems that arise
- Follow-up with laboratories to request additional information or clarify any notes or study results Data review
- Review primary elements to verify calculation accuracy
- Validate primary data against method- and study-specific requirements
- Contact laboratories to resolve any data issues (e.g., missing information, discuss QC results)
- Assess individual laboratory results
- Perform data analysis and assess performance against data quality objectives
- Provide storage space for sampling kit materials and supplies and freezer space for archived GLFMSP samples, GLLA samples, and other study samples, through the length of the contract
- Provide fish homogenization support and other sample preparation support to GLFMSP and other studies
- Develop and maintain comprehensive sampling and analytical manuals containing current SOPs
- Create and maintain program documentation, tracking forms, field recording forms for GLLA, WQS, GLFMSP and other studies
- Provide support to the *Research Vessel Mudpuppy* including: Observing sampling activities, providing Global Positioning System (GPS) software training, and updating SOPs

Deliverables: Development, assembly and distribution of sampling kits; technical support to field teams for sampling and analysis; reports documenting research and evaluation of sampling and analytical procedures; procurement and oversight of sampling processing, archiving, and analysis laboratories; sampling and analytical manuals in hard-copy and electronic format suitable for upload to GLNPO's website; quality system documentation including documentation of data quality objectives and statistical sampling designs.

Task 4: Statistical Support and Data Interpretation

The contractor shall provide statistical support in planning, documenting, implementing, assessing, and reporting on environmental monitoring projects, special studies, and other strategies to implement GLNPO's programmatic objectives. The contractor shall conduct statistical and geostatistical data analysis and interpretation, including applying GIS and visualization tools, to describe, evaluate, and present environmental conditions. The contractor shall develop, evaluate, document, and apply environmental models to predict environmental conditions based on available data. Specific activities include:

- Assist with the development of data quality objectives and implementation of systematic planning for studies collecting or using environmental data, including assisting in development of statistical sampling designs and calculating statistical power and confidence associated with possible design scenarios

- Write and maintain automated programs for conducting statistical analysis of study data
- Provide summary and graphical representations of statistical data assessments for use in developing reports
- Design and conduct modeling and statistical analyses, such as parametric analyses (including linear and nonlinear regression analysis, ANOVA, two-sample and paired ttests) non-parametric analyses (including Sen regression analysis for detection and estimation of trends, Spearman rank correlations, Wilcoxon sign-rank and rank sum tests), and other statistical analyses and data interpretation strategies to support implementation and reporting of studies
- Develop, evaluate, and utilize algorithms to process satellite imagery and other remote sensing data for water quality and other environmental parameters
- Research, develop, and implement mathematical models and analyses to develop and evaluate temporal and spatial analysis of environmental parameters
- Evaluate available data for use in data interpretation and analysis, addressing data quality and scientific issues
- Research, identify, recommend, and implement appropriate statistical analyses to answer specific study questions
- Conduct geo-statistical analysis of environmental data including development, implementation, and evaluation of geo-statistical modeling efforts
- Provide summary and graphical representations of geo-statistical modeling results
- Present results of statistical analyses, modeling efforts, and other data interpretations strategies to EPA and project stakeholders
- Respond to technical questions regarding technical approaches, data interpretation strategies, and results
- Write and maintain programs for conducting statistical and geo-statistical analysis of project and QC data
- Assist EPA in interpreting and reporting environmental information using GIS
- Provide guidance on the statistical impacts of various aspects of environmental studies, including the effect of analytical precision, sensitivity and bias on study data and the ability to meet study goals
- Provide scientific, statistical, geo-statistical, and quality management support to evaluate, analyze, interpret and report on environmental data

When performing these activities, the contractor shall clearly specify the methods, procedures, assumptions, relevant citations, data sources, and data that support the results and any recommendations offered. Where applicable, the contractor also shall document alternative methods, procedures, and assumptions that were considered in the statistical analysis.

Deliverables: Data summaries, reports, and graphical illustrations detailing results of scientific, modeling, statistical, and geo-statistical analysis of environmental data; modeling and analysis of total phosphorus and other parameters including evaluation of statistical power to evaluate reductions in total phosphorus loading in different parts of the lakes reports detailing the technical approach, methods, procedures, assumptions, relevant citations, data sources, data and results of statistical and geo-statistical analysis of environmental data; maps of sampling stations and monitoring data.

Task 5: Development of Technical, QA, and Program Reports

The contractor shall assist EPA in developing comprehensive technical, quality assurance, and scientific reports on results of studies, strategies, and monitoring programs administered by GLNPO. This support shall primarily consist of collecting, compiling, analyzing and presenting data and information that EPA may use in decision making processes. The contractor shall provide all documents for WACOR review and approval, prior to production of the final version. Specific activities include:

- Review, compile, and summarize historical and current information associated with environmental monitoring, environmental remediation, environmental modeling, and other projects
- Develop graphics, maps, and illustrations, presenting data, project information, and results of data interpretation, analysis, and modeling
- Develop draft reports (e.g., limnology report) documenting project details and objectives, results, interpretation of data, and conclusions for EPA review
- Integrate comments received from reviewers into revised versions as directed by EPA
- Produce final hardcopy reports and electronic versions of final reports suitable for distribution on EPA websites
- Develop presentations detailing project information and data, graphical illustrations and maps of project information and data, modeling results, program information, and other information associated with GLNPO initiatives
- Develop materials presenting data and other information on Great Lakes initiatives for distribution and presentation on EPA websites

Deliverables: Subsequent versions of the Water Quality Survey Monitoring report revised to incorporate feedback from EPA on the draft. Assume support to development of annual reports to support the Biology, Limnology, and Great Lakes Fish Monitoring and Surveillance Program (GLFMSP).

Task 6: Program Management Support

As directed by the EPA WACOR, the contractor shall assist EPA in coordinating and administering GLNPO programs. The contractor shall provide scientific, technical, analytical, and administrative support for programmatic projects and initiatives. Specific activities include:

- Develop and implement tools for tracking, documenting, archiving, and presenting program information
- Compile and analyze programmatic information in support of development of reports, web content, outreach materials, briefings and presentations
- Develop for EPA review, and implement approaches and procedures, based on EPA standard procedures and guidelines as appropriate, to compile, document, track, archive and record programmatic information

Deliverables: Summaries and reports presenting program information. Assume 5-10 programmatic reports.

Task 7: Meeting and Outreach Support

The contractor shall coordinate and support meetings, workgroups, and conferences on environmental monitoring projects and other studies including providing technical support to develop guidance documents, studies, reports, and other materials related to the activities performed under this contract. The contractor shall prepare all documents for WACOR review and approval, prior to production of the final version.

Specific activities include:

- Develop technical documents (e.g., technical reports, data summaries, issue papers, briefing materials) to support EPA's analysis of technical issues and options related GLNPO programs
- Develop technical documents or outreach materials (e.g., fact sheets, brochures, presentations, guidance documents, training modules) to assist EPA Regions, States, and collaborators in implementing GLNPO programs
- Develop briefing materials and status reports related to GLNPO projects and support provided under this contract
- Assist EPA in disseminating information to stakeholders in the Great Lakes region
- Track communications and record interactions
- If requested by written technical direction from the EPA WACOR, identify and evaluate meeting locations; finalize meeting space logistics; finalize contract for meeting space; coordinate with meeting space personnel
- Recruit subject matter experts and set-up travel arrangements, consistent with EPA travel requirements
- Develop and facilitate registration materials
- Provide meeting facilitation, develop evaluation tools, take minutes, and distribute follow up materials
- If requested by written technical direction from the EPA WACOR, attending, presenting materials, or supporting EPA activities at technical workshops, conferences, symposiums, training sessions, or public meetings.

Deliverables: Presentations, fact sheets, meeting agendas, meeting registration websites, and meeting minutes.

The contractor shall assume one trip of one staff each for two days to Syracuse, NY; one trip of one staff each for three days to Ithaca, NY; one trip of one person for two days to Alpena, MI; one trip of one staff for three days to Buffalo, NY; one trip of five staff for four days to Toronto, Ontario; one trip of one staff for five days to Minneapolis, Minnesota; three trips of one staff for three days in Mount Pleasant, Michigan; and four trips of one staff for three days to Chicago, IL for estimating purposes.

IV. SCHEDULE OF DELIVERABLES:

Specific deliverables, by Task, are detailed in the table below. All work will be determined by written technical direction.

This work requires experience in the development and manipulation of basic geospatial datasets, map layer, geodatabases and ESRI map application templates. It is necessary for the contractor to have familiarity with EPA's Geoplatform, or a similar platform at another federal agency or department.

| TASK No. | DELIVERABLE | DATE DUE TO EPA |
|---|--|--|
| Task 0 - Work Plan, Progress evaluations, and Monthly Progress Reports | | |
| | Workplan and budget | According to contract |
| | Monthly progress reports | Monthly |
| Task 1 - Scientific, Statistical, Visualization, and Quality Assurance Support to EPA's Great Lakes National Program Office - Quality Management Support | | |
| | Data quality assessments. Includes narrative detailing results of assessment | 30 days after receipt of a complete data set |
| | Technical support and materials for conducting on-site field and laboratory audits | To be established by written technical direction |
| Task 2 - Information Management Support | | |
| | Processing and upload of project data into the SeaBird data System | To be established by written technical direction |
| | Processing and upload of project data into GLFMSP database | To be established by written technical direction |
| | Processing and upload of GLFMSP, GLLA, and biological project data into the Great Lakes Environmental Database | To be established by written technical direction |
| | Development and implementation of specific program queries for existing systems | To be established by written technical direction |
| Task 3 – | | |
| | Development of sampling designs | To be established by written technical direction |
| | Evaluation of sampling designs | To be established by written technical direction |
| | Development, assembly and distribution of sampling kits for the GLFMSP | To be established by written technical direction |
| | Procurement and oversight of homogenization laboratory for the GLFMSP | To be established by written technical direction |

| | |
|--|--|
| Task 4 – Statistical Support and Data Interpretation | |
| Data analysis and modeling results for monitoring and assessment studies presented in data summaries and visualizations, technical reports, and maps | To be established by written technical direction |
| Conduct statistical analysis of biological and limnological data in support of annual reports | To be established by written technical direction |
| Task 5 – Development of Technical, QA, and Program Reports | |
| Technical, QA, and Program Management Reports | To be established by written technical direction |
| Task 6 – Program Management Support | |
| Program Management Support | To be established by written technical direction |
| Task 7 – Meeting and Outreach Support | |
| Provide technical support for webinars and teleconference meetings | To be established by written technical direction |
| Presentations and meeting minutes to support meeting and outreach tasks | 14 days after provision of technical direction |

V. MISCELLANEOUS:

Software Application Files and Accessibility:

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

| | |
|--------------------------------|--|
| Preferred text format: | MS Word, 8.0 or higher (Office 2007 or higher) |
| Preferred presentation format: | Power Point, Office 2007 or higher |
| Preferred graphics format: | Each graphic is an individual GIF file |
| Preferred portable format: | Adobe Acrobat, version 6.0 or higher |

The WACOR shall identify which of delivered products will require 508 compliance.

VI. TRAVEL

The contractor shall anticipate sixteen (16) contractor trips in support of this WA over the duration of the performance period. Travel will be directly related to the scope of this Work Assignment.

VII. MEETINGS, CONFERENCES, TRAINING EVENTS, AWARD CEREMONIES AND RECEPTIONS

All appropriate clearances and approvals required by Agency policy in support of any and all conference related activities and expenses, including support of meetings, conferences, training events, award ceremonies and receptions, including the form 5170 for all meetings costing more than \$20,000, shall be obtained by the EPA CL-COR as needed and provided to the Contracting Officer (CO). Work under conference related activities and expenses shall not occur until this approval is obtained and provided by the EPA CL-COR.

VIII. CONTRACTOR IDENTIFICATION

Contractor personnel shall always identify themselves as contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative. The contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the CO, CL-COR and/or WACOR.

IX. PRINTING

All copying and printing shall be accomplished within the limitations of the printing clause of the contract.

X. Technical Direction

All direction under this WA will be provided as written technical direction from the WACOR, or Alternate WACOR, as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the Contract Level Contracting Officer's Representative (CL COR) and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

XI. QUALITY ASSURANCE SURVEILLANCE PLAN:

All task(s) identified in the performance work statement above are subject to review and approval by the EPA WACOR based on the general guidelines of the contract quality assurance surveillance plan regarding: Programmatic, cost control, timeliness/deliverables, and document development standards.

Work Assignment Form. (WebForms v1.0)

PERFORMANCE WORK STATEMENT
CSRA EP-C-15-012
Work Assignment No. 02-14
Amendment 1
Period of Performance: 8/1/17-7/31/18

I. ADMINISTRATIVE:

A. Title: Support to EPA's Great Lakes National Program Office

B. Work Assignment Manager:
Louis Blume

Great Lakes National Program Office
(GLNPO)
77 West Jackson Boulevard (MC: G-9J)
Chicago, IL 60604
312-353-2317
blume.louis@epa.gov

Alternate Work Assignment Manager:
Eric Osantowski

Great Lakes National Program Office
(GLNPO)
77 West Jackson Boulevard (MC: G-9J)
Chicago, IL 60604
312-353-1373
osantowski.eric@epa.gov

Louis Blume serves as the WACOR and Dr. Eric Osantowski serves as the Alternate WACOR. There are 3 Task Managers including 1) Elizabeth Murphy for the Great Lakes Fish Monitoring and Surveillance Program, 2) Dr. Eric Osantowski for the Biology and Limnology Programs, 3) Dr. Thomas Kevin O'Donnell for the Coastal Wetlands Monitoring Program, and 4) Derek Ager for the Integrated Atmospheric Deposition Network. Technical Direction for all programs will be provided by the WACOR.

Contract PWS Paragraph: 2.0

C. Quality Assurance:

Tasks 1, 2, 3, 4, and 5 in this work assignment require quality assurance (QA). Collection, use and analysis of data will be identical to the procedures described in the Project-Specific Quality Assurance Project Plan (PQAPP) completed under tasks 1, 2, 3, 4, and 5 of WA 01-14, consistent with the Agency's Quality Assurance (QA) requirements, appending the Contract Quality Assurance Project Plan (QAPP). The project specific QA requirements must be addressed in the monthly progress reports as specified under Task 0, below.

D. Background: No Change

II. OBJECTIVE:

The purpose of this amendment 1 to work assignment 02-14 is to make a change to Task 1, add LOE to Task 2 for the purpose of expanding the Data Submission and Data Status sites to accommodate IADN data, and add deliverables to Task 4 and 6. Changes are redlined below.

This work will be completed commensurate with Sections 3.2 and 3.4 of the Contract Level PWS.

III. TASK DETAIL:

The contractor shall perform the following tasks:

Task 0 - Work Plan, Progress evaluations, and Monthly Progress Reports: No Change

Task 1 - Scientific, Statistical, Visualization, and Quality Assurance Support to EPA's Great Lakes National Program Office - Quality Management Support

The contractor shall support implementation of GLNPO's Quality Management program including developing and implementing tools to inventory, track, assess, and report on project planning and quality documentation for GLNPO projects as indicated by written technical direction provided by the WACOR. The contractor shall assist EPA with reviewing, evaluating, and implementing EPA Quality Policy directives, guidance documents and other supporting materials. The contractor shall provide quality management support to the Great Lakes Fish Monitoring and Surveillance Program, the Water Quality Survey of the Great Lakes, and the Great Lakes Legacy Act Program, as well as other environmental monitoring programs and special studies. The contractor shall provide quality support to plan, document, conduct, evaluate, and report on environmental monitoring programs. Specific activities include:

- Conduct literature searches in support of the design of monitoring programs, interpretation of study data, and development of QA assessment parameters including data quality objectives
- Review and assess EPA Quality Policy initiatives, implementation and guidance materials
- Assist in the development and revision of quality system documentation
- Develop and implement procedures and checklists to review quality system documentation
- Develop and implement tools to inventory, track, assess, and report on project planning and quality documentation for GLNPO projects
- Provide standard reports on quality system documentation status for all GLNPO funded projects
- Evaluate sampling, analytical, and geospatial data reporting standards, data reporting forms, and supporting documentation
- Conduct data verification, data quality assessments, and data usability assessments and provide reports presenting the results of the reviews
- Develop, evaluate and implement statistical analyses in support of data quality assessments; create and maintain all supporting statistical programs
- Prepare QA reports for environmental monitoring and other study data
- Provide technical support for conducting on-site field or laboratory audits of EPA field contractors and contractor grantee laboratories and the laboratory aboard the *Research Vessel Lake Guardian*
- Provide technical and quality management support to review reports, journal articles, and

related documents

- Provide general technical and quality assurance support to plan, document, and implement monitoring programs and other special studies

As directed by the EPA WACOR, the contractor shall assist EPA in conducting or coordinating peer reviews of program methodology, strategies, methods, and protocols or other products related to this work assignment task. When coordinating reviews of study plans, protocols, methods, or third-party data (e.g., journals, grey literature, non-EPA databases, etc.), the contractor shall focus on determining the applicability of plans to specific EPA needs and shall make any appropriate recommendations to the EPA WACOR concerning their use in present form or with suggested modifications. The contractor shall ensure that in-house reviews are performed by qualified staff, and shall contact the author(s) of the subject materials to obtain additional information or clarifications about the material when such information is necessary to render a complete review.

The contractor shall provide or coordinate independent review of program methodology, strategies, methods, and protocols or other products related to this work assignment task as provided by written technical direction from the EPA WACOR. The contractor shall ensure that these independent reviews are conducted by technically qualified, independent reviewers in accordance with EPA's policy on peer review as outlined in EPA's Science Policy Council Handbook on Peer Review. In this effort, the contractor may identify and consult with experts in the specific area of interest to EPA.

Deliverables: Quality system documentation reviews in standardized formats, standard reports on quality system documentation status for all GLNPO funded projects, monthly status reports on quality system documentation, data quality assessment reports in standardized formats, audit checklists and other materials in support of field and laboratory audits, reports on field and laboratory audits, project-specific quality assurance reports, and technical support for conducting on-site field and laboratory audits. We estimate approximately 20-30 project level quality plan reviews along with 18-25 data package reviews. Specific details on expectations of reviews is defined above and in the specific work assignment quality documents (previously approved).

Task 2 - Information Management Support

The contractor shall maintain and operate existing information management systems to efficiently, securely, and systematically gather, store, and manipulate a variety of technical, environmental, statistical, scientific, quality, and laboratory information related to Great Lakes protection, characterization, evaluation, and remedial activities. The contractor shall assist EPA in planning and implementing information management systems based on detailed evaluation of existing systems, including expanding existing systems where appropriate. Please consider use of Agile Development approaches or methodology wherever applicable consistent with EPA's Office of Environmental Information (OEI) directives.

Specific activities include:

- Develop, document, and implement sampling, analytical, and geospatial data reporting standards, data reporting forms, and supporting documentation

- Maintain and operate existing information management systems
- Develop and implement standardized evaluation of data submittals against requirements of study databases and provide standard reports on results of the evaluation
- Convert hardcopy and electronic field and analytical data into complete electronic files compliant with specific data standards including the Great Lakes Environmental Database and the Great Lakes Sediment Database (GLSED)
- Update databases with incoming data and revised data submissions and track updates
- Assist with input, maintenance, retrieval, analysis, reporting, and reformatting/integration and normalization of environmental data from EPA databases

Deliverables: Maintenance and operation of existing information management systems; processing submitted data into EPA standard formats, such as the Great Lakes Environmental Database (GLENDA) Standard; standard reports on data submission evaluation; providing assistance to GLNPO on uploading datasets so they are publicly available through agency CDX and WQX connections; assisting the GLNPO Great Lakes Fish Monitoring and Surveillance Program (GLFMSP) with database queries that allow easy access by GLNPO and GLRI associated scientists and maintains a historical version controlled record for eventual public dissemination; assist the GLNPO Open Lake Limnology Monitoring Program with database queries that allow easy access by GLNPO and GLRI associated scientists and maintains a historical version controlled record for eventual public dissemination

Task 3: Sampling and Analytical Support: No Change

Task 4: Statistical Support and Data Interpretation

The contractor shall provide statistical support in planning, documenting, implementing, assessing, and reporting on environmental monitoring projects, special studies, and other strategies to implement GLNPO's programmatic objectives. The contractor shall conduct statistical and geostatistical data analysis and interpretation, including applying GIS and visualization tools, to describe, evaluate, and present environmental conditions. The contractor shall develop, evaluate, document, and apply environmental models to predict environmental conditions based on available data. Specific activities include:

- Assist with the development of data quality objectives and implementation of systematic planning for studies collecting or using environmental data, including assisting in development of statistical sampling designs and calculating statistical power and confidence associated with possible design scenarios
- Write and maintain automated programs for conducting statistical analysis of study data
- Provide summary and graphical representations of statistical data assessments for use in developing reports
- Design and conduct modeling and statistical analyses, such as parametric analyses (including linear and nonlinear regression analysis, ANOVA, two-sample and paired ttests) non-parametric analyses (including Sen regression analysis for detection and estimation of trends, Spearman rank correlations, Wilcoxon sign-rank and rank sum tests), and other statistical analyses and data interpretation strategies to support implementation and reporting of studies

- Develop, evaluate, and utilize algorithms to process satellite imagery and other remote sensing data for water quality and other environmental parameters
- Research, develop, and implement mathematical models and analyses to develop and evaluate temporal and spatial analysis of environmental parameters
- Evaluate available data for use in data interpretation and analysis, addressing data quality and scientific issues
- Research, identify, recommend, and implement appropriate statistical analyses to answer specific study questions
- Conduct geo-statistical analysis of environmental data including development, implementation, and evaluation of geo-statistical modeling efforts
- Provide summary and graphical representations of geo-statistical modeling results
- Present results of statistical analyses, modeling efforts, and other data interpretations strategies to EPA and project stakeholders
- Respond to technical questions regarding technical approaches, data interpretation strategies, and results
- Write and maintain programs for conducting statistical and geo-statistical analysis of project and QC data
- Assist EPA in interpreting and reporting environmental information using GIS
- Provide guidance on the statistical impacts of various aspects of environmental studies, including the effect of analytical precision, sensitivity and bias on study data and the ability to meet study goals
- Provide scientific, statistical, geo-statistical, and quality management support to evaluate, analyze, interpret and report on environmental data

When performing these activities, the contractor shall clearly specify the methods, procedures, assumptions, relevant citations, data sources, and data that support the results and any recommendations offered. Where applicable, the contractor also shall document alternative methods, procedures, and assumptions that were considered in the statistical analysis.

Deliverables: Data summaries, reports, and graphical illustrations detailing results of scientific, modeling, statistical, and geo-statistical analysis of environmental data; modeling and analysis of total phosphorus and other parameters including evaluation of statistical power to evaluate reductions in total phosphorus loading in different parts of the lakes reports detailing the technical approach, methods, procedures, assumptions, relevant citations, data sources, data and results of statistical and geo-statistical analysis of environmental data; maps of sampling stations and monitoring data; recommendations for tools to integrate data from the Coastal Wetland Database with other existing data sets, such as hydrological and land use data, in a mapping tool using ArcGIS.

Task 5: Development of Technical, QA, and Program Reports: No change

Task 6: Program Management Support

As directed by the EPA WACOR, the contractor shall assist EPA in coordinating and administering GLNPO programs. The contractor shall provide scientific, technical, analytical,

and administrative support for programmatic projects and initiatives. Specific activities include:

- Develop and implement tools for tracking, documenting, archiving, and presenting program information
- Compile and analyze programmatic information in support of development of reports, web content, outreach materials, briefings and presentations
- Develop for EPA review, and implement approaches and procedures, based on EPA standard procedures and guidelines as appropriate, to compile, document, track, archive and record programmatic information
- **Deliverables:** Summaries and reports presenting program information. Assume 5-10 programmatic reports. Categorizing the 280 boxes by major group and determine a process for management and disposition (digitization, archiving digitally or to FRC, or disposal) of boxes by major group, then work with GLNPO and the GLNPO Records Manager to complete those processes by major box group. As prioritized by the GLNPO Science, Monitoring, Evaluation and Reporting (SMER) section, review, organize, and digitize science records to make them available electronically to GLNPO staff or outside researchers. Complete the historical record of the Water Quality Survey (WQS) Standard Operating Procedures (SOPs) and Quality Assurance Project Plans (QAPPs). Complete the inventory and assessment of biology samples in the 536 S. Clark, Chicago, storage room.

Task 7: Meeting and Outreach Support: No Change

The contractor shall assume one trip of one staff each for two days to Syracuse, NY; one trip of one staff each for three days to Ithaca, NY; one trip of one person for two days to Alpena, MI; one trip of one staff for three days to Buffalo, NY; one trip of five staff for four days to Toronto, Ontario; one trip of one staff for five days to Minneapolis, Minnesota; three trips of one staff for three days in Mount Pleasant, Michigan; and four trips of one staff for three days to Chicago, IL for estimating purposes.

IV. SCHEDULE OF DELIVERABLES:

Specific deliverables, by Task, are detailed in the table below. All work will be determined by written technical direction.

This work requires experience in the development and manipulation of basic geospatial datasets, map layer, geodatabases and ESRI map application templates. It is necessary for the contractor to have familiarity with EPA's Geoplatform, or a similar platform at another federal agency or department.

| TASK No. | DELIVERABLE | DATE DUE TO EPA |
|---|--------------------------|------------------------|
| Task 0 - Work Plan, Progress evaluations, and Monthly Progress Reports | | |
| | Workplan and budget | According to contract |
| | Monthly progress reports | Monthly |

| | |
|---|--|
| Task 1 - Scientific, Statistical, Visualization, and Quality Assurance Support to EPA's Great Lakes National Program Office - Quality Management Support | |
| Data quality assessments. Includes narrative detailing results of assessment | 30 days after receipt of a complete data set |
| SOP and narrative template for IADN | To be established by written technical direction |
| Technical support and materials for conducting on-site field and laboratory audits | To be established by written technical direction |
| Task 2 - Information Management Support | |
| Processing and upload of project data into the SeaBird data System | To be established by written technical direction |
| Processing and upload of project data into GLFMSP database | To be established by written technical direction |
| Processing and upload of GLFMSP, GLLA, and biological project data into the Great Lakes Environmental Database | To be established by written technical direction |
| Development and implementation of specific program queries for existing systems | To be established by written technical direction |
| Expansion of the Data Submission and Data Status sites to accommodate IADN data | To be established by written technical direction |
| Task 3 – | |
| Development of sampling designs | To be established by written technical direction |
| Evaluation of sampling designs | To be established by written technical direction |
| Development, assembly and distribution of sampling kits for the GLFMSP | To be established by written technical direction |
| Procurement and oversight of homogenization laboratory for the GLFMSP | To be established by written technical direction |
| Task 4 – Statistical Support and Data Interpretation | |
| Data analysis and modeling results for monitoring and assessment studies presented in data summaries and visualizations, technical reports, and maps | To be established by written technical direction |

| | |
|--|--|
| Conduct statistical analysis of biological and limnological data in support of annual reports | To be established by written technical direction |
| Recommendations for tools to integrate data from the Coastal Wetland Database with other existing data sets, such as hydrological and land use data, in a mapping tool using ArcGIS. | To be established by written technical direction |
| Task 5 – Development of Technical, QA, and Program Reports | |
| Technical, QA, and Program Management Reports | To be established by written technical direction |
| Task 6 – Program Management Support | |
| Program Management Support | To be established by written technical direction |
| Complete inventory and assessment of biology samples in the 536 S. Clark, Chicago, storage room | To be established by written technical direction |
| Complete historical record of the Water Quality Survey (WQS) Standard Operating Procedures (SOPs) and Quality Assurance Project Plans (QAPPs) | To be established by written technical direction |
| As prioritized by the GLNPO SMER section, digitized science records to make them available electronically to GLNPO staff or outside researchers. | To be established by written technical direction |
| List of boxes by category as prioritized by the SMER section | To be established by written technical direction |
| Task 7 – Meeting and Outreach Support | |
| Provide technical support for webinars and teleconference meetings | To be established by written technical direction |
| Presentations and meeting minutes to support meeting and outreach tasks | 14 days after provision of technical direction |

V. MISCELLANEOUS:

Software Application Files and Accessibility:

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

Preferred text format:

MS Word, 8.0 or higher (Office 2007 or higher)

| | |
|--------------------------------|--|
| Preferred presentation format: | Power Point, Office 2007 or higher |
| Preferred graphics format: | Each graphic is an individual GIF file |
| Preferred portable format: | Adobe Acrobat, version 6.0 or higher |

The WACOR shall identify which of delivered products will require 508 compliance.

VI. TRAVEL

The contractor shall anticipate sixteen (16) contractor trips in support of this WA over the duration of the performance period. Travel will be directly related to the scope of this Work Assignment.

VII. MEETINGS, CONFERENCES, TRAINING EVENTS, AWARD CEREMONIES AND RECEPTIONS

All appropriate clearances and approvals required by Agency policy in support of any and all conference related activities and expenses, including support of meetings, conferences, training events, award ceremonies and receptions, including the form 5170 for all meetings costing more than \$20,000, shall be obtained by the EPA CL-COR as needed and provided to the Contracting Officer (CO). Work under conference related activities and expenses shall not occur until this approval is obtained and provided by the EPA CL-COR.

VIII. CONTRACTOR IDENTIFICATION

Contractor personnel shall always identify themselves as contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative. The contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the CO, CL-COR and/or WACOR.

IX. PRINTING

All copying and printing shall be accomplished within the limitations of the printing clause of the contract.

X. Technical Direction

All direction under this WA will be provided as written technical direction from the WACOR, or Alternate WACOR, as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the Contract Level Contracting Officer's Representative (CL COR) and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR in draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

XI. QUALITY ASSURANCE SURVEILLANCE PLAN:

All task(s) identified in the performance work statement above are subject to review and approval by the EPA WACOR based on the general guidelines of the contract quality assurance surveillance plan regarding: Programmatic, cost control, timeliness/deliverables, and document development standards.

| | | | | | | | | | | |
|---|----------------|----------------------|--|----------------------------|---|---|------------------|---------|-------------------------|------------------|
| EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment | | | | | | Work Assignment Number 02-15 | | | | |
| | | | | | | <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: | | | | |
| Contract Number EP-C-15-012 | | | Contract Period 08/01/2015 To 07/31/2018 Base Option Period Number 2 | | | Title of Work Assignment/SF Site Name Organic Materials Management | | | | |
| Contractor CSRA LLC | | | | | Specify Section and paragraph of Contract SOW 2.2., 2.10, 2.16 | | | | | |
| Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval | | | | | | Period of Performance From 08/01/2017 To 07/31/2018 | | | | |
| Comments: In accordance with clause B.1 immediate start is authorized for this work assignment. If the work plan is not approved within 35 calendar days after receipt of the work plan, the contractor shall stop work. | | | | | | | | | | |
| <input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund | | | | | | | | | | |
| SFO <input type="checkbox"/> Note: To report additional accounting and appropriations date use EPA Form 1900-69A. (Max 2) | | | | | | | | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| Authorized Work Assignment Ceiling | | | | | | | | | | |
| Contract Period: | | Cost/Fee: | | LOE: | | | | | | |
| 08/01/2015 To 07/31/2018 | | | | 0 | | | | | | |
| This Action: | | | | 800 | | | | | | |
| | | | | | | | | | | |
| Total: | | | | 800 | | | | | | |
| Work Plan / Cost Estimate Approvals | | | | | | | | | | |
| Contractor WP Dated: | | | | Cost/Fee | | LOE: | | | | |
| | | | | | | | | | | |
| Cumulative Approved: | | | | Cost/Fee | | LOE: | | | | |
| | | | | | | | | | | |
| Work Assignment Manager Name Steven Rock | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: 513-569-7149 | | | | |
| | | | | | | FAX Number: | | | | |
| Project Officer Name Nancy Parrotta | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: 202-564-5260 | | | | |
| | | | | | | FAX Number: | | | | |
| Other Agency Official Name | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: | | | | |
| | | | | | | FAX Number: | | | | |
| Contracting Official Name Donna Reinhart | | | | | | Branch/Mail Code: | | | | |
| _____ (Signature) (Date) | | | | | | Phone Number: 513-487-2114 | | | | |
| | | | | | | FAX Number: | | | | |

Contract No. EP-C-15-012 CSRA LLC for Option Period 2

Work Assignment: 02-15

WACOR: Steve Rock

WSWD Branch, Water Systems Division, NRMRL, ORD
26 West Martin Luther King Drive, Cincinnati, Ohio 45268

Mail Code: 489

(513) 569-7149 E-mail: rock.steven@epa.gov

Task Partners:

Task 1 Alex Lan

Alex Lan

NERL, Office of Research and Development

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William Jefferson Clinton Building

1200 Pennsylvania Avenue, N. W.

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Washington, DC 20460

202.564.0841 (bb) 202.591.6536

lan.alexis@epa.gov

Task 3 Melissa Pennington

Melissa Pennington

U.S. EPA Region 3

Office of Materials Management

1650 Arch Street

Philadelphia, PA 19103-2029

Mail Code: 3LC40

215.814.3372

pennington.melissa@epa.gov

LOE: 800 hours

Period of Performance: Effective date of WA through July 31, 2018

I. Purpose

The purpose of this work assignment is to advance the understanding and best practices of Organic Materials Management.

To achieve this purpose, the contractor shall be expected to conduct an evaluation of the organic waste management system at 29 Palms Marine Base in California, and to support the anaerobic digester database work of Melissa Pennington in Region 3 Philadelphia.

The intended audience for this project is the general public, public officials, owners and managers of food providers and the food waste reduction community.

II. Background

Currently, up to 40% of food produced in the U.S. is wasted, and 95% of wasted food is landfilled. Landfills are the third largest anthropogenic source of methane (CH₄) emissions in the U.S., accounting for 18% of total emissions in 2012. CH₄ contributes to more than one-third of today's anthropogenic warming because its global warming potential is at least 25 times greater than CO₂. Diverting wasted food and other organics from landfills dramatically reduces its greenhouse gas impact.

Many states are implementing regulations that require diversion of food waste and other organics from landfills. Massachusetts and California have banned commercial organic waste from landfills. Likewise, Connecticut and Vermont have set limits on food waste going to landfills.

States and communities know how much food in aggregate is landfilled. However, most are lacking detailed information on the sources of this waste, especially with regard to the food-processing sector. This lack of information regarding food waste producers is hampering efforts to implement regulations and reduce greenhouse gas emissions. As a result, there is a strong regional and national need to research commercial and industrial sources and quantities of food waste, and to make this information accessible and useful to communities in fulfilling greenhouse gas reduction and sustainability goals.

III. QUALITY ASSURANCE

Tasks in this work assignment do not require Quality Assurance Project Plans (QAPP). Consistent with the Agency's QA requirements, the contractor does not need to supplement the Contract Quality Assurance Project Plan (QAPP) or to prepare a Project Specific Quality Assurance Project Plan (PQAPP).

IV. Detailed Task Description

Task 0: Work Plan and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs. In addition,

The contractor shall use the "Project Planning Checklist" Attachment B to the Contract QMP to define QA tools and procedures used in each of the tasks, consistent with the requirements of the QMP. A copy

of the completed checklist is to be provided to the ORD WACOR and other project participants for review and retained in the project files for each task.

If the scope of project tasks changes to include collection of environmental data, or use of secondary data, a determination will be made to develop a QAPP for the task, consistent with the requirements of *EPA Requirements for QA Project Plans (QA/R-5)*.”

This task also includes monthly progress and financial reports. Monthly financial reports must include a table with the invoice LOE and cost amount broken out by the tasks in this WA.

Deliverables: Work plan and monthly progress and financial reports.

Task 1 Food Waste Management Technology Demonstration at Military Bases

Project Scope: Pursuant to the Memorandums of Understanding between the U.S. EPA’s Office of Research and Development (ORD) and the U.S. Army for Installations, Energy and Environment (IE&E) around Net Zero, ORCA, and EnviroPure. The objectives of this project is to provide a proof-of-concept evaluation and demonstration of a food waste prevention technology that can potentially be used to achieve zero waste related goals. The demonstrations will be held in dining facilities at two independent Army installations, each with distinct waste generation profiles and demographics: 29 Palms Marine Base. The evaluation will last approximately six months. Technical and research support services are envisioned for all phases of the project including baseline evaluation; demonstration support and monitoring; data analysis; and documentation of research results.

IV. Purpose

The Office of Research and Development (ORD) in the US Environmental Protection Agency (EPA) seeks out collaborative research and development projects and demonstrations that can advance key environmental science questions while assisting on-the-ground decision makers with better options to systematically manage energy, water, and waste. ORD engaged with Department of Defense (DoD) installations in the Mojave Desert region to explore planning options for resilient operations to address uncertainties in water, energy, and waste management. In meeting with the Marine Corps Air Ground Combat Center Twentynine Palms (MCAGCC) installation, one area of interest was organic waste recovery technologies. The purpose of this proposed research would be to advance the understanding and best practices of water recovery from organic waste streams. To achieve this purpose, EPA will systemically evaluate the use and performance of existing waste-to-water recovery technology currently in use at 3 dining facilities (“chow halls”) located at MCAGCC, and to be installed at Camp Wilson. Based on the results of the evaluation, EPA will work with MCAGCC and DoD staff to make recommendations to the base and other DoD installations as to the use of this waste-water technology and how to optimize its potential for a given context/ operating environment. The results of the study will help DoD and other stakeholders understand the potential of waste-to-water technology as a DoD-wide water recovery solution.

V. Background

Currently, up to 40% of food produced in the U.S. is wasted, and 95% of wasted food is landfilled. DoD installations in the Mojave Desert face extreme challenges with securing and maintaining adequate water supplies to support drinking water, irrigation, recreation, and maintenance needs. Volumes of food waste and pressure on limited water supplies are likely to increase in the short term with projected military build-up, and in the long term as the installation continues to meet the security needs of the country in future decades. MCAGCC is meeting both of these challenges in an integrated way through application the “ORCA” proprietary food waste to water recovery technologies. MCAGCC plans to install a different system, “EnviroPure” at Camp Wilson. Both technologies are food waste decomposition systems that break down food waste into greywater effluent. The OCRA system is currently installed and recovers water from food waste in the three (3) main side Chow Halls which are the primary source of food for Marines stationed at the installation. The EnviroPure system will be installed at another chow hall at Camp Wilson later this year. The reclaimed water is currently used to supplement water needed to run the base wastewater treatment plant. However, apart from gallons recovered, little is known about the life cycle costs/ benefits of this technology in terms of factors such as energy inputs, staff time, water quality outputs, and maintenance costs. A holistic, systems based analysis of system performance in the waste-water-energy-nexus context would help the installation and other stakeholders in similar circumstances better understand how to optimize the deployment and operation of these and similar water recovery systems.

VI. TASK DESCRIPTION AND RESEARCH QUESTIONS

EPA will perform a multi-scale (energy, water, waste, and economic) “Consumer Reports” style evaluation of the ORCA technology at the 3 main side Chow Halls at MCAGCC, and the EnviroPure technology to be installed at Camp Wilson. The aim is to evaluate the claims of the manufacturers for the particular use of these devices in a real-world kitchen, and in the broader contexts of the energy, water and waste profile of the base itself, and the unique Mojave environment.

The performance evaluation will incorporate, but is not limited to, Life Cycle Cost analysis, analysis of water quality and quantity, and waste stream characterization. The specifics of the evaluation are open to input from MCAGCC and DoD personnel, but at a minimum, it is expected that EPA shall seek to answer the following questions about real world use, performance, and optimization of this technology at the installation:

- How is the technology used currently, and how does this compare to the manufacturer’s recommendation installation/ use?
- What are the inputs in water, energy, time? What are the tradeoffs or offsets?
- What are the outputs, in terms of water quantity and quality?
- Which food waste types provide the most water recovery?
- What is the overall impact on food waste volumes?

- What is the “Carbon footprint” for the technology and what impact does the technology have on the carbon footprint of organic waste sent to landfill?
- What is the impact on the wastewater treatment facility in terms of BOD? Are there other materials of concern in the wastewater?
- What are the economics of the device – capital, maintenance, and running cost; avoided cost of landfilling wasted food; time of personnel more or less using it?
- What quality of work space factors are impacted, such as convenience and smell?
- What compatible upstream or downstream technologies or practices could enhance performance?
- Given the previous questions, how could use of the technology be optimized from a systems perspective (energy, waste, water, economics) for MCAGCC or other installations?
- Given the previous questions, how can MCAGCC easily capture metrics on landfill diversion?

VII. SPECIFIC TASKS

Task 1.1: Site Characterization

EPA, with the assistance of contracted support, will evaluate the installation/ deployment and use of the ORCA and EnviroPure technologies at MCAGCC in order to assess the potential for the technologies to operate as it should according to Manufacturers’ specs. This will provide an important contextual baseline for assessing the whole systems effectiveness of the technology. This should include interviews or observations of kitchen staff and collection of whatever baseline energy, water, and economic performance data is already available.

An on-site waste stream characterization analysis would provide a baseline estimate of waste generation and allow for an evaluation on the relative impact of the technology with respect to diversion. The procedure for the characterization method and analysis will closely follow the standard test method set forth by ASTM International (D5231-92, reapproved 2008).

Task 1.2: Develop Testing Protocol and Data Collection Plan

Develop a standard waste mix that would be fed into the device. The food waste mix should be representative of a typical restaurant, cafeteria, or other food service institution. The same inputs would be metered. Having a standard food waste mix will allow comparison across devices and across bases. Based on the results of the site characterization in Task 1, EPA and MCAGCC staff will develop a plan for collecting relevant water quality, quantity, waste, energy, and economic data for a specified time period to meet the objectives outlined above. The plan will identify data sources, reference quality management procedures, and specify a timeframe for data collection activities.

Task 1.3: Data Collection and Evaluation

Once concurrence is established on the Data Collection Plan, necessary data shall be collected and an LCA analysis performed in order to provide answers to each of the research questions outlined above and any supplemental questions contained in the characterization report. Scenarios will be constructed using available data from MCAGCC, other compatible locations, and EPA LCA programs to help answer questions about optimization or and beneficial deployment options.

Task 1.4 Production of Final Report

In addition to generating data on system performance, the results of the evaluation will inform a report to DoD on how deployment of waste-to-water technology can be optimized in terms of physical operating environment, enhancement with compatible upstream and downstream technology, and in context of the wider resource needs/ flows of a military base. The report will provide guidance on site specific constraints or selection criteria for deployment and use of the technology, recommendations for how performance could be enhanced in combination with compatible technologies, and an overall assessment of the viability of this technology as a water recovery solution at both the site/ installation level and DoD wide. The report will also provide information to MCAGCC staff on how they can most easily capture metrics associated with diverting food waste from landfills. The intended audience for this project and final report is MCAGCC staff, DoD staff at other Mojave installations and more broadly, public officials, owners and managers of food providers, and the materials/waste management community.

Task 2 Anaerobic Digestion Facilities Processing Wasted Food Data Collection Project

Project Summary

The Sustainable Food Management (SFM) program promotes diversion of wasted food from landfills. As this practice gathers momentum in this country, increasing amounts of municipal solid waste (MSW) will be processed using anaerobic digestion. To meet this need, sufficient capacity to process the organic fraction of MSW is needed. Therefore, building capacity for composting and anaerobic digestion is a critical component of the SFM strategy.

EPA is preparing to launch a data collection effort that will establish a baseline capacity for processing food waste in anaerobic digesters in the US. The data will be collected annually in order to track the growth of this capacity over time.

Region 3 has developed a preliminary data set of anaerobic digestion (AD) facilities processing food waste using publically available data.

Goal(s):

1. For the existing EPA data set: Identify and provide accurate contact information, where needed, for as many data collection respondents as possible.
2. Identify facilities not included in the existing EPA data set and provide accurate contact information for these facilities.

3. Insure the best possible response rate by contacting facilities that have not responded to the surveys.

EPA is seeking assistance in three areas as described below. Each task will be done in succession.

SPECIFIC TASKS

Task 2.1: Filling Gaps in the Existing Data Set

In order to collect the data – EPA has to make sure the data is collected effectively. To do this gaps need to be filled in the existing data prior to distribution of surveys.

- EPA will provide the contractor with a spreadsheet of all facilities in the existing EPA data set that require additional information.
- EPA anticipates this spreadsheet will include 50 or less facilities.
- The contractor will research and identify the following information for each facility:
 - o Street address of facility
 - o City (Facility is located in)
 - o State (Facility is located in)
 - o EPA Region (Facility is located in)
 - o Zip Code (for facility location)
 - o Facility phone number
 - o Contact Name

*The contact needs to be someone who is associated with and has knowledge of the operation of the facility. Administrative employees are not suitable contacts. Vendors that built the facilities are not preferred.

- o Contact Title, position, or affiliation to the facility
- o Email of contact
- o Phone number for contact
- o Mailing address (for contact)
- o Type of Facility (Stand-alone, WWTP, or On-Farm)
- o Operating Status (Planning stage/Design Stage/Permitting, Under Construction, Operational, Temporary Shut-down, Ceased Operation, Other)

Task 2.2: Identification of Additional AD Facilities

EPA will provide the contractor with a spreadsheet of all facilities in the existing EPA data set. This spreadsheet currently includes 135 facilities.

Using the following sources the contractor will research and identify facilities that that are not currently in the existing EPA data set. These facilities must be anaerobic digestion facilities that process food-based feedstocks.

- Data received from the Water Environment Federation (WEF);
- Data received from Environmental Research and Education Foundation (EREF);
- Data obtained from EPA's AgSTAR database;
- American Biogas Council (ABC) project profiles;
- Information obtained from BioCycle's Find-a-Digester platform;

- State databases; and
- Other relevant sources.

For each newly identified facility, the contractor shall collect all of the data identified in task 1.

Task 2.3: Respondent Follow-up

The data will be collected using three different survey monkey surveys, one for each type of digester that EPA is collecting data on (stand-alone digesters, digesters at wastewater treatment plants and on-farm digesters). After the data collection surveys have been distributed, responses will be automatically collected into spreadsheets by survey monkey. EPA will periodically identify what facilities have not yet provided responses.

EPA will provide the contractor with a list of facilities that have not provided responses to the surveys. The contractor will contact these respondents by phone to:

- Bring the survey to the respondents attention and request that the respondent complete the survey
- Answer respondents questions about the survey
- Clarify responses and/or
- Manually collect data over the phone and enter into the surveys if requested to do so.

Deliverables:

1. For the existing EPA data set: Identify and provide accurate contact information, where needed, for as many data collection respondents as possible.
2. Identify facilities not included in the existing EPA data set and provide accurate contact information for these facilities.
3. Insure the best possible response rate by contacting facilities that have not responded to the surveys. Contact non-responders and attempt to complete survey. It is anticipated that there will be approximately 40 facilities to contact.

V. SCHEDULE/DELIVERABLES

| Task | Deliverables | Dates |
|--|---|--|
| 0 Ongoing | 1)Workplan 2)Monthly Progress and Financial Reports | 1)in accordance with contract requirements 2)Monthly |
| 1 Food Waste Management Technology Demonstration at Military Bases | 1)Demonstration facilitation 2)Report 3)Revised report following EPA comments | 1) Approx. Aug. 15 – Feb. 15 2) 30 days after demonstration ends 3) 30 days after initial report |

| | | |
|---|---|--|
| | | |
| 2 Anaerobic Digestion Facilities Processing Wasted Food Data Collection | 1)complete EPA provided database 2) research facilities missing from EPA database 3)contact non-respondents of survey | 1) Sept 1 2) March 30 3) 30 days following EPA distribution of surveys |

VI. REPORTING REQUIREMENTS

Monthly Progress Reports (including a progress evaluation discussion)

Financial Reports

Project-Specific Reports

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose.

Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The tasks under this work assignment do not require the acquisition of “off-site” facilities for conferences and meetings as defined in the IPN 12-05. And the events associated with this work assignment are not covered by EPA Order 1900.3 and do not require EPA Form 5170.

The contractor shall immediately alert the WA COR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, AV and rental of venue costs, etc. The EPA WACOR will then prepare approval internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a “conference,” with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals).

In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

| | |
|--------------------------------|--|
| Preferred text format: | MS Word, 8.0 or higher (Office 2007 or higher) |
| Preferred presentation format: | Power Point, Office 2007 or higher |
| Preferred graphics format: | Each graphic is an individual GIF file |
| Preferred portable format: | Adobe Acrobat, version 6.0 |

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN

for WSD's Mission Support

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CLCOR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

| | | | | | | | | | | |
|---|----------------|----------------------|--|----------------------------|--|---|------------------|---------|-------------------------|------------------|
| EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment | | | | | | Work Assignment Number 02-16 | | | | |
| | | | | | | <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: | | | | |
| Contract Number EP-C-15-012 | | | Contract Period 08/01/2015 To 07/31/2018 Base Option Period Number 2 | | | Title of Work Assignment/SF Site Name NCEA Websites & Databases | | | | |
| Contractor CSRA LLC | | | | | Specify Section and paragraph of Contract SOW 2.0, 2.2, 2.3, 2.4, 2.10, 2.15, 2.17, 3.1.2, 3.13 | | | | | |
| Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval | | | | | | Period of Performance From 08/01/2017 To 07/31/2018 | | | | |
| Comments: In accordance with clause B.1 immediate start is authorized for this work assignment beginning on August 1, 2017. If the work plan is not approved within 35 calendar days after receipt of the work plan, the contractor shall stop work. | | | | | | | | | | |
| <input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund | | | | | | | | | | |
| Note: To report additional accounting and appropriations data use EPA Form 1900-69A. | | | | | | | | | | |
| SFO <input type="checkbox"/> (Max 2) | | | | | | | | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
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| 5 | | | | | | | | | | |
| Authorized Work Assignment Ceiling | | | | | | | | | | |
| Contract Period: | | Cost/Fee: | | LOE: | | | | | | |
| 08/01/2015 To 07/31/2018 | | | | 0 | | | | | | |
| This Action: | | | | 3,200 | | | | | | |
| Total: | | | | 3,200 | | | | | | |
| Work Plan / Cost Estimate Approvals | | | | | | | | | | |
| Contractor WP Dated: | | | | Cost/Fee | | LOE: | | | | |
| Cumulative Approved: | | | | Cost/Fee | | LOE: | | | | |
| Work Assignment Manager Name Maureen Johnson <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | Branch/Mail Code: Phone Number: 703-347-8611 FAX Number: 305-425-8314 | | | | |
| Project Officer Name Nancy Parrotta <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | Branch/Mail Code: Phone Number: 202-564-5260 FAX Number: | | | | |
| Other Agency Official Name <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | Branch/Mail Code: Phone Number: FAX Number: | | | | |
| Contracting Official Name Donna Reinhart <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | Branch/Mail Code: Phone Number: 513-487-2114 FAX Number: | | | | |

PERFORMANCE WORK STATEMENT
CSRA EP-C-15-012
Work Assignment No. 02-16
Period of Performance: 8/1/17-7/31/18

I. ADMINISTRATIVE:

A. Title: Support for the NCEA Websites and Databases

B. Work Assignment Manager:

Maureen Johnson
Office of Research and Development,
National Center for Environmental
Assessment, Immediate Office (IO)
1200 Penn Ave, NW, MC-8601P
Washington, DC 20460
703-347-8611

Alternate Work Assignment Manager:

Susan Rieth
Office of Research and Development,
National Center for Environmental
Assessment, Integrated Risk Information
System (IRIS) Division
1200 Penn Ave, NW, MC-8601P
Washington, DC 20460
703-347-8582

C. Quality Assurance:

The tasks in this work assignment do not require environmental measurements. Consistent with the Agency's quality assurance (QA) requirements, the contractor does not need to supplement the Contract Level Quality Assurance Project Plan (QAPP) or to prepare a Project-Specific Quality Assurance Project Plan (PQAPP). The contractor shall immediately notify the Project officer of any significant QA issues, and how they are being resolved addressed, in the monthly progress reports as specified below under Task 0.

D. Background:

The U.S. Environmental Protection Agency (EPA or Agency) has established the National Center for Environmental Assessments (NCEA) to provide the public with access to the best science in the form of research products related to human health and ecological risk assessments. On target with this, one of NCEA's critical goals is to support the ORD Research Priorities, these are new robust research programs that in varying levels of need, depend on the strong presence of NCEA's websites like the Exposure Factors Program/Hand Book and tool box (EPA-Expo-Box), the Benchmark Dose Software (BMDS), the Casual Analysis/Diagnosis Decision Information System (CADDIS), the Integrated Risk Information System (IRIS) database, the EPA RISK assessment website (which includes links to most of NCEA's products and publications), and various other NCEA websites that include guidance, training, and workshop materials that capture the full portfolio of NCEA's outreach initiatives.

II. OBJECTIVE:

The primary goal of all these systems and web sites is to enhance preparedness, utility and business resiliency, detection, response, and recovery efforts relative to assessing risk in the

environment, vulnerabilities, and threats if a natural calamity or incident occurs. Additionally, NCEA seeks innovative ways to distribute information to the targeted audience by utilization of emerging technologies especially in the area of Web 2.0. This not only allows NCEA to be more “green” in cutting back on the less environmentally friendly methods of communications, but also to demonstrate its alignment with the administration’s goals of making agency services and information more accessible to citizens so they can see value in their government.

Risk Assessment is one of the key areas of environmental protection all agency programs focus on and each of the systems (supported under this WA) have strong ties to assessments of water quality, the environment and human health. In each of these programs, NCEA seeks the best way to get information out to the correct and varied target audiences from our websites. We also require support for the dissemination of guidance and information materials related to the understanding of hazard assessment, dose response, risk characterization and risk communication within the mission of EPA.

The purpose of this work assignment is to: support new projects, on-going maintenance and long-term operation of all NCEA websites and databases in support of communicating, educating, and sharing the mission of the NCEA and the EPA. NCEA is the principal organization for production of EPA’s reports on human health and ecological risk assessments in the Office of Research and Development. Therefore, it is imperative that NCEA’s websites offer timely streamlined pathways (quick easy to use, task oriented and topical) to this research, models, and data technology. Based on our annual website statistics it is evident that NCEA’s websites (and interactive databases driving them) are critical to supporting thousands of researchers all around the world whether it is an immediate emergency or a long-time cleanup issue.

The expectations of this work assignment is for improved designs of the NCEA websites and database to meet our stakeholders and external (and internal) needs while complying with the latest Agency web guidance and web initiatives. To that end, this work assignment requires improvements to the NCEA websites that will incorporate the agency’s OneEPA web template design efforts, reduce any redundant, outdated content (referred to by the EPA web-guide as “ROT”) on the website, and reduce the cost of maintenance and development on the site through the use of this new technology and Agency approved software.

The tasks described in this work assignment will outline the steps necessary to achieve the work assignment’s goals. Working together, the various tasks will complement one another to produce a more efficient, cohesive public experience that will improve the usefulness of the website and support the business processes of the NCEA staff and divisions.

This work will be completed commensurate with Sections 3.2 and 3.4 of the Contract Level PWS. The level of effort estimated for this work assignment is **3,200 hours**.

To achieve this outcome, the contractor shall be expected to provide:

- 1) Operation and maintenance of the NCEA Database(s).

2) Development and maintenance of the NCEA websites based on Agency guidance, program changes, and new technology.

3) Web analytics for site usability/enhancement and improved usability.

4) Technical support by a Subject Matter Expert (SME) with expertise to provide guidance on areas of toxicology and/or database design and website development.

Requirements

In order to perform the work under this work assignment the contractor must have:

- 2 or more staff members who have accounts on Drupal.org and provide their user ID's in order to verify this work experience/activity in the Drupal forum environment. They also need to have a minimum of 2 years of experience with either managing a large scale web site in Drupal or with engineering in a Drupal environment.
- 2 or more staff members on this work assignment who have accounts on EPA's Web mailing list or Editors-in-Chief mailing list for a minimum of 2 years to be knowledgeable with the EPA Web guidelines and standards of development. They should also have 1-2 years of experience with EPA's Drupal environment and have experience with the editor and webmaster roles in order to complete the task directives within this work assignment.
- 1 or more staff members on this work assignment with 2 or more years of experience in the following technologies: MySql Database Administration, Oracle Database Administration, Oracle Application Development, ColdFusion Application Development, JavaScript coding, and integrating dynamic application development with a Drupal website.
- 1 or more staff members with a Master's degree or higher in toxicology to provide guidance and input as needed for the IRIS website.

The contractor must have staff that are skilled with the Drupal Web Content Management System (WCMS) software to have the ability to articulate design enhancements to the EPA Design Team (Office of Web Communication) in order to help improve the experience of visitors to the EPA websites under this work assignment.

III. TASK DETAIL:

The contractor shall perform the following tasks:

Task 0 - Work Plan Submission, WA Management and Reports:

The contractor shall prepare a detailed work plan and budget for the accomplishment of the indicated tasks in accordance with the clause Work Assignments (EPAAR 1552.211-74). The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and

qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the local metropolitan area, the contractor shall include information on plans to manage work and contract costs.

In addition, the work plan shall specify that a Supplemental Project Specific Quality Assurance Project Plan (SQAPP) appending the Contract QAPP or a PQAPP is not required.

This task also includes monthly progress and financial reports. Monthly financial reports must include a table with the invoice LOE and cost amount broken out by the tasks in this WA. In addition, this table should provide costs and estimates at the sub-task level and have the capability to track costs to the type of work performed. It is recommended that all costs associated with projects and/or work requests shall be reported in the monthly report as well as at an aggregate level. The work plan shall also provide an analysis of the existing and projected constraints, and the feasibility of accomplishing the project's purpose.

Secondly, the contractor shall participate in bi-weekly meetings to discuss open work requests under the various task in this work assignments, get technical clarification, or discuss any issues that may have come up since the assignments were given. As a result of these meetings, the contractor will submit meeting minutes with a list of assignments, and then at the end of the month, submit these as part of the monthly progress report.

The purposes of the progress report are to list completed deliverables and accomplishments. The monthly report can also include details on the finished assignments, the steps toward completing the larger tasks as they are done, any problems they may have encountered, or any changes in the schedule for completing the work request. The contractor shall continually review the types of work requests that are assigned and propose improvements, striving to implement efficiencies in performance when complimentary requirements are issued or the process can be improved in the work that is done. The contractor shall assure that duplication of effort relative to other ongoing work assignments under this contract is not occurring.

Lastly, the contractor shall immediately alert the EPA WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event (e.g., meeting or training). Those costs would include travel of prime and consultant personnel, planning and facilitation costs, audio/visual, and rental of venue costs. The EPA WACOR will prepare approval internal paperwork for the event and will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Deliverables: Work plan and monthly progress and financial reports.

Task 1 - Operations and support for the NCEA Databases:

With the vast number of reports, tools and websites that NCEA uses to serve content to the public we use several Oracle backend databases to manage many of these products. This first

task will require the support, operation and maintenance of these databases. In addition, to database administration (adding users, managing roles, writing SQL scripts for database updates), the contractor shall maintain data entry screens for the EPA's maintenance of the content stored in these back-end systems. The current interfaces to these databases is through ColdFusion based Administration systems.

Sub-Task 1.1: Support of the NCEA Tables residing in the EIMS Database

Support of this database includes on-going operations and maintenance to include, but not be limited to: new table development, retirement of tables/removal, data entry form improvements, system integration for better quality control, link checking, improved searching methods, exports, uploads, downloads, web analytics, or archiving retired content.

Sub-Task 1.1.1 Support for the EPA-Expo-Box Application

Provide database administrative or dynamic application development (to front-end software to an Oracle database) for the Expo-Box application. Provide operation and maintenance per specifications outlines in sub-task 1.1.

Sub-Task 1.1.2 Support for the EPA-Eco-Box Application

Provide database administrative or dynamic application development (to front-end software to an Oracle database) for the Eco-Box application. Provide operation and maintenance per specifications outlines in sub-task 1.1.

Sub-Task 1.1.3 Support for the Water Quality Climate Review Application

Provide database administrative or dynamic application development (to front-end software to an Oracle database) for the WQA-Report application. Provide operation and maintenance per specifications outlines in sub-task 1.1.

Sub-Task 1.2: Support for the Integrated Risk Information System (IRIS) Database

Support of this database includes on-going operations and maintenance to include, but not be limited to: new table development, retirement of tables/removal, data entry form improvements, system integration for better quality control, link checking, improved searching methods, exports, uploads, downloads, web analytics, or archiving retired content.

Sub-Task 1.3: Support for the Casual Analysis Diagnosis Decision Information System (CADDIS) Database

Support of this database includes on-going operations and maintenance to include, but not be limited to: new table development, retirement of tables/removal, data entry form improvements, system integration for better quality control, link checking, improved searching methods, exports, uploads, downloads, web analytics, or archiving retired content.

Deliverables: Scripts shall be sent to the administrators in the NCC. The WACOR shall be copied on all correspondence with the system administrators. Exports from the databases may be in the form of spreadsheets, scripts, or Oracle exports and shall be sent directly to the WACOR and accounted for in the monthly progress reports.

Task 2 - Development to the NCEA websites based on Agency guidance, program changes, and new technology:

The contractor shall provide the following as it pertains to products from NCEA program:

- Provide maintenance for the NCEA Web sites, which includes site updates as necessary to comply with ORD and Agency Web requirements, and/or changes in the EPA server environment or in the supporting database(s).
- Provide other modifications or enhancements as specified in Technical Directives (TDs) throughout the period of performance, including enhancements of selected Drupal pages, addition of new static and dynamic web pages, and redesign of selected pages to:
 - Fulfill the mission of the Agency and any related Web initiatives
 - Improve the performance of the site,
 - Comply with Section 508 for Accessibility, and
 - Improve the usability based on recommendations from NCEA, ORD or Agency stakeholder feedback.
- Provide Section 508 compliant reports (in PDF format) for posting on the NCEA websites and databases.
- Verify Section 508 compliance of products generated from within NCEA.
- Provide support in the review the site for broken links, redundant, outdated, trivial (ROT) content, usability/focus groups, and other EPA initiatives to improve the function of the website.

The contractor shall be responsible for maintaining the NCEA Internet (and in some cases Intranet) websites and performing any related web support as requested. This task includes the following sub-tasks:

Sub-Task 2.1: Support for the Risk Assessment (RISK) Websites

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages that are part of this website shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the Risk websites shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This sub-task includes providing support to the following website(s):

- <https://www.epa.gov/risk> (or any future aliases this may be called)
- <https://www.epa.gov/erasc> (or any future aliases this may be called)
- <https://www.epa.gov/aboutepa> (as it related to NCEA pages)
- <https://www.epa.gov/healthrisk> (or any future aliases this may be called)

Sub-Task 2.1.1 Support for the EPA Expo-Box (Expo-box) Website

All new and major revisions to Drupal web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This sub-task includes providing support to the following website(s):

- <https://www.epa.gov/expobox> (or any future aliases this may be called)
- <https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=20563> (exposure factors program)

Sub-Task 2.1.2 Support for the EPA-Eco-Box (Eco-box) Website

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/ecobox> (or any future aliases this may be called)

Sub-Task 2.1.3 Support for the Hydraulic Fracturing (HF-Study) Website

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/hfstudy> (or any future aliases this may be called)

Sub-Task 2.1.4 Support for the Provision Peer Reviewed Toxicity Values for Superfund (PPRTV) Website

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web

pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <https://www.epa.gov/risk/pprtv> (or any future aliases this may be called)

Sub-Task 2.2: Support for the Integrated Science Assessments (ISA) Website

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/isa> (or any future aliases this may be called)
- <https://hero.epa.gov/hero/> (or any future aliases this may be called)

Sub-Task 2.3: Support for the Integrated Risk Information System (IRIS) Website

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the IRIS websites shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/iris> (or any future aliases this may be called)
- <http://intranet.epa.gov/ncea/iristrack/index.htm> (or any future aliases this may be called)
- <https://cfint.rtpnc.epa.gov/ncea/iristrac/index.cfm>
- <http://www.epa.gov/dioxin> (or any future aliases this may be called)

Sub-Task 2.4: Support for the Benchmark Dose Modeling System (BMDS) website

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the

BMDS website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/bmds>

Sub-Task 2.5: Support for the Causal Assessment (CADDIS) Website

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the CADDIS websites shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s), but it may include the waters of the US, mountaintop mining and other ecological assessments topics done by NCEA:

- <http://www.epa.gov/caddis> (or any future aliases this may be called)
- <http://www.epa.gov/bristolbay>

Sub-Task 2.6: Support for the Weather-Related Website

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages in this web area shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the NCEA weather-related websites shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <https://www.epa.gov/risk/global-change-research-program-products-and-publications> (or any future aliases this may be called)
- <https://www.epa.gov/climate-research> (or any future aliases this may be called)

Sub-Task 2.6.1 Support for the Water Quality Climate Review (WQCR) Website

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format,

standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <https://www.epa.gov/ccwqa> (or any future aliases this may be called)

Sub-Task 2.6.2 Support for the Integrated Climate Land-Use (ICLUS) Website

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <http://www.epa.gov/iclus> (or any future aliases this may be called)
- <https://globalchange.epa.gov> (or any future aliases this may be called)

Sub-Task 2.6.3 Support for the Traits Database and Website

All new and major revisions to web pages shall be reviewed and tested by the contractor, then by the content provider and/or the WACOR. Routine or enhanced modifications shall be tested by the contractor, before they are sent to the WACOR for review prior to deployment. All web pages shall be consistent with ORD and Agency policies regarding the appearance, format, standards and function of Internet and Intranet web pages. Additionally, the web pages on the ISA website shall not compromise the security procedures enforced through the NCC facility in RTP, NC.

This includes providing support to the following website(s):

- <https://www.epa.gov/risk/traits-data-sources-and-metadata> (or any future aliases this may be called)

Sub-Task 2.7: Support for the Development of New NCEA Websites

The contractor shall be responsible for overseeing updates to the NCEA web sites (listed above) by adhering to the EPA Web guidelines at <http://www.epa.gov/webguide>. The contractor may be asked to make updates to these based on new technology or EPA Web Guidance as new direction becomes available. Specifically, this task may provide contractor support to provide a range of strategic communications and outreach requests to develop new features to our web sites and databases based on the newest technologies that EPA Web is considering. Code re-use is recommended with any enhance that may affect our web sites.

This task may include the evaluation of Web 2.0 technology to include but not be limited to:

- Development of the NCEA web sites in the newest Agency Web standards and technology, utilizing efficiencies of the latest Web 2.0 technology/applications.
- Development of media (YouTube, podcasts, etc.) to promote the information of NCEA's research.
- Development of on-line training or support web sites for webinars to promote the information of NCEA research.
- Use of XML, Drupal, Twitter, Govdelivery, Blogging, or RSS feeds to promote the use of NCEA research to a wider audience.
- Development of web sites or databases using more sustainable solutions (with technology).
- Development of improved integration and sharing with like systems/databases across Government-wide platforms, in an effort to support data sharing or access via open data initiatives (like NSCEP, SEMS, SI, NARA, e-Chem portal, Data.gov, etc.).

Deliverables: The contractor shall provide updates to the websites under Task 2 as needed, copying the WACOR on all correspondence regarding major deliverable in the monthly progress report. For estimating purposes only, the contractor shall assume they will provide quarterly reviews and corrections for missing metadata, broken links and ROT on all NCEA Websites; develop & implement improvements or updates to a minimum of two websites annually to a maximum of six websites; and will prepare a minimum of 50 to a maximum of 900 PDFs for posting.

The contractor shall provide Monthly Progress Reports outlining any work performed under this task.

Task 3 - Web Analysis and Summary Reports:

The contractor may be asked to provide two (2) reports produced by analyzing EPA's Web Analytics (<https://www.epa.gov/web-analytics>) for NCEA web sites that would include (1) the results of these tools, and (2) CSRA's recommendations for improvements to be implemented as part of Task 2. This means they will:

- Provide a summary report with information on web site analysis using EPA's tools (Google Analytics, Sitebeam, etc.) as listed on the page <https://www.epa.gov/web-analytics>.
- Perform web site usability testing to improve the use of the site and develop personas for site usage design.
- Provide link checking reports, fix broken links and note external links (as outlined in the webguide) on all the NCEA web sites pages.

Deliverables: The contractor shall provide a consolidated report with these results as a MS Word file and as a 508 compliant PDF. These reports shall include web usage statistics (graphs) for all these web sites listed in task 2 and include any other related data. For estimating purposes only, the contractor shall assume they will provide (2) comprehensive

reports; they will perform 1 -2 usability tests on the web sites defined in Task 2 using EPA analytical tools listed above; and will make recommendations in theses report that should improve the statistics to these sites by a minimum of 12% over the course of a year.

The contractor shall include in the Monthly Progress Report any work performed under this task.

Task 4 - Technical Consulting:

The contractor shall provide technical Subject Matter Expert (SME) support with expertise to provide guidance on areas of toxicology (when needed), website development, and database administration.

The contractor shall be responsible for providing individual subject matter experts (SME) with expertise to provide technical support in the following areas (on a case-by-case basis):

- Toxicology (Risk Assessment, Dose-response, Hazard Identification, IRIS Assessments, etc.)
- Database Administration and Development (Ajax, Apex, Oracle, Access, SQLplus, MySQL, etc.)
- Website Development (Drupal, JavaScript, Flash, Sharepoint, 508 compliances, etc.)

Under this task the SME may be asked to provide a technical review on any new technology to the website or database design issue related to operating NCEA's websites. This may also include migrating new web products for the NCEA websites (see listed in Task 2) to the EPA environment, database development support, or any website improvements. Technical review/commenting/editing may be necessary before new websites are released to the public.

SME's with a toxicological background shall be asked to review implications of updates or improvements in relation to the IRIS website and databases.

Deliverables: The contractor shall provide written correspondence to the WACOR on anything related to this task. For estimating purposes only, the contractor shall assume the SME may be asked to attend at a minimum two face-to-face discussions (to a maximum of 25 phone-based technical issues discussions) about the improvements discovered in Tasks 1-3.

The contractor shall include in the Monthly Progress Report any work performed under this task.

IV. SCHEDULE OF DELIVERABLES:

Specific deliverables, by Task, are detailed in the table below. All work will be determined by technical direction.

The contractor should plan to attend bi-weekly meetings with the WACOR to review work assignments (outlined in the TDs) to discuss details of the work, clarification of requirements, and schedule of deliverables. Anything agreed in these discussions should be documented by the contractor and emailed to the WACOR for confirmation. All deliverables and schedules should be listed in the progress report for official notification of receipt from the EPA.

| TASK No. | DELIVERABLE | DATE DUE TO EPA |
|-------------------------------------|---|--|
| Task 0 - Workplan Submission | | |
| | Workplan and budget | According to contract |
| | Monthly progress reports | Monthly |
| | | |
| Task 1 – Database Support | | |
| | System scripts & exports | As requested by technical direction |
| | Web Analytics | Monthly |
| | | |
| Task 2 – Website Support | | |
| | Standard Template Web Design and Development in Drupal | To be determined by written technical direction; an exact date cannot be determined prior to task assignments and management priorities. |
| | PDF production and 508 Verification | |
| | Customized Design/ embedded Java as needed | |
| | Graphic Design | |
| | PDF-rework | |
| | Web site staging and deployment | |
| | Training | |
| | Reporting on broken links, usability, web analytics | |
| Task 3 – Web Analytics | | |
| | Run analysis on the web sites listed above (in Task 2) through the EPA's Web Analytics tool suite for review and reporting. | Quarterly |

| | |
|---|---|
| Summary reports of results should include underlining data and contractor's analysis/recommendations. | As requested by written technical direction |
| | |
| Task 4 – Technical Consulting | |
| Document assistance and scientific / technical support | To be determined by written technical direction; an exact date cannot be determined prior to receiving stakeholder or management feedback |
| Support international coordination (attend up to 6 webinars) | |
| Support for utility SMEs (up to 5 trips) | |

V. MISCELLANEOUS:

Software Application Files and Accessibility:

Software application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See:

<http://www.section508.gov/>

Regarding FITARA, online publications of maps will leverage EPA's GeoPlatform technical architecture, hardware and software, to the fullest extent possible for public search and discovery. Quality assurance and metadata support should adhere to Agency approved Geospatial procedures and standards, see: <https://www.epa.gov/geospatial/geospatial-policies-and-standards> . All geospatial metadata will, as required by OMB, be published in EPA's Environmental Data Gateway which serves Data.gov, see: <https://edg.epa.gov/metadata/catalog/main/home.page>

| | |
|--------------------------------|--|
| Preferred text format: | MS Word, 16.0 or higher (Office 2013 or higher) |
| Preferred presentation format: | Power Point, Office 2013 or higher |
| Preferred graphics format: | Each graphic is an individual JPG or GIF file, or Adobe Illustrator file |
| Preferred portable format: | Adobe Acrobat, version 11.0 or higher |
| Preferred technology: | Drupal 7, SharePoint, ColdFusion, Apex, Oracle, JavaScript |

All products delivered under this work assignment will require 508 compliances (unless an exception is made) and will include metadata for websites developed or PDFs posted to the EPA Website per the EPA web guidance standard (see <http://www.epa.gov/webguide>).

Reporting Requirements:

- Monthly Progress Reports (including a progress evaluation discussion)
- Financial Reports (with table of task and sub-task totals).

VI. TRAVEL:

The contractor shall anticipate no more than two to four face-to-face trips and two (2) SME trips in support of this WA over the duration of the performance period. Travel will be directly related to the scope of this Work Assignment and support advancement of the work under these Tasks as well as the EPA's Mission to ensure protection of human health and the environment.

VII. MEETINGS, CONFERENCES, TRAINING EVENTS, AWARD CEREMONIES AND RECEPTIONS:

All appropriate clearances and approvals required by Agency policy in support of any and all conference related activities and expenses, including support of meetings, conferences, training events, award ceremonies and receptions, including the form 5170 for all meetings costing more than \$20,000, shall be obtained by the EPA CL-COR as needed and provided to the Contracting Officer (CO). Work under conference related activities and expenses shall not occur until this approval is obtained and provided by the EPA CL-COR.

VIII. CONTRACTOR IDENTIFICATION:

Contractor personnel shall always identify themselves as contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative. The contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the CO, CL-COR and/or WACOR.

IX. PRINTING:

All copying and printing shall be accomplished within the limitations of the printing clause of the contract.

X. TECHNICAL DIRECTION:

The Contract level COR or an authorized individual is permitted to provide technical direction. Technical direction must be within the statement of work of the contract and includes: (1) Direction to the contractor which assists the contractor in accomplishing the Statement of Work, (2) Comments on and approval of reports or other deliverables. Technical direction will be issued in writing or confirmed in writing within seven (7) calendar days after verbal issuance.

One copy of the technical direction memorandum will be forwarded to the Contracting Officer and the Contract Level Contracting Officer Representative.

XI. QUALITY ASSURANCE SURVEILLANCE PLAN:

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards in Attachment 4 of the contract. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in Attachment 4 of the contract, which will then be utilized by the Contract Level Contracting Officer's Representative in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

| | | | | | | | | | | |
|---|---|---|-------------------------------|----------------------------|----------------------------|--|------------------|---------|-------------------------|------------------|
| EPA United States Environmental Protection Agency Washington, DC 20460 Work Assignment | | Work Assignment Number 02-18 | | | | | | | | |
| | | <input type="checkbox"/> Other <input type="checkbox"/> Amendment Number: | | | | | | | | |
| Contract Number EP-C-15-012 | Contract Period 08/01/2015 To 07/31/2018 Base Option Period Number 2 | Title of Work Assignment/SF Site Name Impact of Material Mgmt Applic | | | | | | | | |
| Contractor CSRA LLC | | Specify Section and paragraph of Contract SOW 2.2, 2.10, 2.16, 2.4 | | | | | | | | |
| Purpose: <input checked="" type="checkbox"/> Work Assignment <input type="checkbox"/> Work Assignment Close-Out <input type="checkbox"/> Work Assignment Amendment <input type="checkbox"/> Incremental Funding <input type="checkbox"/> Work Plan Approval | | Period of Performance From 08/01/2017 To 07/31/2018 | | | | | | | | |
| Comments: In accordance with clause B.1 immediate start is authorized for this work assignment. If the work plan is not approved within 35 calendar days after receipt of the work plan, the contractor shall stop work. | | | | | | | | | | |
| <input type="checkbox"/> Superfund Accounting and Appropriations Data <input checked="" type="checkbox"/> Non-Superfund | | | | | | | | | | |
| SFO <input type="checkbox"/> (Max 2) Note: To report additional accounting and appropriations date use EPA Form 1900-69A. | | | | | | | | | | |
| Line | DCN (Max 6) | Budget/FY (Max 4) | Appropriation Code (Max 6) | Budget Org/Code (Max 7) | Program Element (Max 9) | Object Class (Max 4) | Amount (Dollars) | (Cents) | Site/Project (Max 8) | Cost Org/Code |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| Authorized Work Assignment Ceiling | | | | | | | | | | |
| Contract Period: | | Cost/Fee: | | LOE: | | | | | | |
| 08/01/2015 To 07/31/2018 | | | | 0 | | | | | | |
| This Action: | | | | 4,500 | | | | | | |
| Total: | | | | 4,500 | | | | | | |
| Work Plan / Cost Estimate Approvals | | | | | | | | | | |
| Contractor WP Dated: | | Cost/Fee | | LOE: | | | | | | |
| Cumulative Approved: | | Cost/Fee | | LOE: | | | | | | |
| Work Assignment Manager Name Thabet Tolaymat <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | Branch/Mail Code: Phone Number: 513-487-2860 FAX Number: | | | | |
| Project Officer Name Nancy Parrotta <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | Branch/Mail Code: Phone Number: 202-564-5260 FAX Number: | | | | |
| Other Agency Official Name <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | Branch/Mail Code: Phone Number: FAX Number: | | | | |
| Contracting Official Name Donna Reinhart <div style="display: flex; justify-content: space-between;"> <div>_____ (Signature)</div> <div>_____ (Date)</div> </div> | | | | | | Branch/Mail Code: Phone Number: 513-487-2114 FAX Number: | | | | |

**WORK ASSIGNMENT
PERFORMANCE WORK STATEMENT (PWS)**

Contract No. EP-C-15-012

Work Assignment: WA-02-18

WACOR: **Name:** **Thabet Tolaymat**
 Branch: **Materials Management Branch**
 Division: **Land and Materials Management Division**
 Office: **Office of Research and Development**
 Phone: **513-487-2860**
 FAX: **513-569-7879**
 E-mail: **Tolaymat.thabet@epa.gov**
 Mail code: **CHL-113**
 Street Address: **26 West Martin Luther King Drive**
 City, State, Zip: **Cincinnati, Ohio, 45268**

Alt WACOR: **Name:** **David Carson**
 Branch: **Materials Management Branch**
 Division: **Land and Materials Management Division**
 Office: **Office of Research and Development**
 Phone: **513-569-7527**
 FAX: **513-569-7677**
 E-mail: **carson.david@epa.gov**
 Mail code: **116 CHL**
 Street Address: **26 West Martin Luther King Drive**
 City, State, Zip: **Cincinnati, Ohio, 45268**

Period of Performance: Effective date of WA through July 31, 2018

Title: Impact of Materials Management Applications

PWS Sections: 2.2, 2.10, 2.16, 2.4

I. PURPOSE:

The purpose of this work assignment is to evaluate the impact of sustainable materials management on the environment including groundwater. The project will provide information that would enhance US EPA, states and communities to implement decision making with regards to sustainable materials management.

To achieve this purpose the contractor shall be expected to: evaluate secondary data and conduct virtual and in person meetings with key members of the research community.

The intended audience of this project are EPA's Office of Solid Waste and Emergency Response, regional offices and other federal agencies. This project supports programmatic support needs related to our national all hazards homeland security responsibilities by: providing data and information that would lead to more accurate accounting of our solid waste management systems and lead to a higher level resiliency

in our materials management systems.

Other partners and external offices or agencies which should be included in coordination, and the nature of their involvement, are: EPA's Office of Emergency Response, and EPA Regional Offices

This work assignment supports the mission of the Office of Research and Development Sustainable and Healthy Communities Research as described in the FY16-19 Research Action Plan, which relates resources, activities, outputs, audience, short- and long- term outcomes to EPA's pillars of sustainability. Additionally, this work assignment contributes to the commitments made in EPA's *Strategic Plan: 2011 to 2015*.

In support of these requirements, this contract supports the nation's drinking and wastewater infrastructure, collectively known as the Water Sector, in being informed, coordinated, and prepared to prevent, detect, respond to, and recover from terrorist attack and other intentional acts, natural disasters, and other hazards (referred to as the "all hazards" approach), which may also occur, including the needs and challenges posed by natural disasters, catastrophic events, adaptation and impacts of climate change, floods, earthquakes, pandemic illness, and any other events which impact the safety and availability of our water supply.

In pursuit of these efforts, the contractor may be tasked with preparing a correlation summary comparing the results under this work assignment to the components of the Water Security Strategy framework.

II. BACKGROUND:

Historically, materials management in the United States has been handled through a variety of options that include disposal, recycling, or some form of treatment. Given the increased need to institute waste management practices that are sustainable and acknowledge critical environmental, social, and economic considerations (the three pillars of sustainability, also referred to as the triple bottom line), an examination of well-established as well as emerging waste management methods is warranted to facilitate decision-making.

Regulations that helps manage our nation's solid waste stream are almost 30 years old if not more. Since that time a large volume of data was generated on the performance of these facilities and evaluate their containment robustness into the future.

III. QA REQUIREMENTS:

Tasks two (2) and three (3) in this WA require direct environmental measurements and/or the use of secondary data. Consistent with the Agency's quality assurance (QA) requirements, the contractor has already developed a complete written Project-Specific Quality Assurance Project Plan (PQAPP) as part of a WA under previous option period (WA 01-18). As such the project-specific quality assurance requirements specified under Task 0, below have been addressed. Any amendment(s) to the QAPPs shall conform to EPA requirements for QA Project Plans as defined in "EPA Requirements for Quality Assurance Project Plans" (QA/R-5) (EPA 2001).

IV. DETAILED TASK DESCRIPTION:

All direction under this WA will be provided as written technical direction from the WACOR, Alternate WACOR as appropriate. If provided first as verbal technical direction to the contractor, it will be confirmed in writing within 5 calendar days, with a copy to the Contract Level Contracting Officer's

Representative (CL COR) and the Contracting Officer (CO), and is subject to the limitations of the technical direction contract clause. Each initial deliverable shall be provided to the EPA WACOR and EPA CL COR in draft form for review and comment. The contractor shall incorporate WACOR review comments into revisions of the drafts. All drafts and final reports shall be approved by the WACOR.

The contractor shall perform the following tasks:

Task 0: Work Plan, Progress evaluations, and Monthly Progress Reports

The contractor shall develop a work plan that describes how each task will be carried out. The work plan shall include a schedule, staffing plan, level of effort (LOE), and cost estimate for each task, the contractor's key assumptions on which staffing plan and budget are based, and qualifications of proposed staff. If a subcontractor(s) is proposed and subcontractors are outside the metropolitan DC area, the contractor shall include information on plans to manage work and contract costs. The work plan shall also provide an analysis of the existing and projected constraints, and the feasibility of accomplishing the project's purpose.

In addition, the contractor shall amend the project specific quality assurance plan (PQAPP), if needed, and ensure the quality of secondary data used to complete these tasks. This task also includes monthly progress and financial reports. The monthly progress report shall indicate, in a separate QA section, whether significant QA issues have been identified and how they are being resolved. Monthly financial reports must include a table with the invoice LOE and costs' broken out by the tasks in this WA.

In addition, in each monthly progress report, the contractor shall, at the introduction to the discussion of this WA, discuss actual progress toward achieving the purpose of this WA, , including problems encountered, issues that may need to be resolved, and anticipated timing for completing the goals of the WA. The contractor shall provide an overview of contract projects, striving to implement efficiencies in performance when complimentary requirements are issued. The contractor shall assure that duplication of effort relative to other ongoing work assignments under this contract is not occurring

Deliverables: Work plan, PQAPP and monthly progress and financial reports.

Task 1: Programmatic support

The contractor shall provide support for the area of sustainable materials management in terms analysis including the development, editing, and updating as necessary bulletins, advisories, reports, guidance document, fact sheets, and other outreach materials related to the research area. The contractor shall support, assess, summarize and provide reports and project files related to status, strategic planning, cost/benefit and/or economic impact analysis for Sustainable Materials Management initiatives. The number of anticipated initiatives to support is 2.

The contractor shall perform technical peer review of documents and materials related to the topics described in this WA, which were prepared by entities other than the contractor the contractor's team members and consultants. No peer review or review of technical or analytical documents should be undertaken by the contractor on documents, data, or studies contributed to, or completed by the contractor, contractor's team members, or its consultants.

The contractor shall follow all procedures concerning COI and Ethics related to the peer review process outlined in Section 3.4.5 of the EPA's Science Policy Council Handbook on Peer Review, (EPA/100/B-

06/002, 3rd Edition) or the most recent rendition of that handbook. The Handbook can be found electronically at the EPA website, <http://www.epa.gov/peerreview> and should be considered the guidance document for all elements of the peer review process.

The specific processes and responsibilities involved with the Peer Review task include:

- Selecting appropriate subject matter experts as peer reviewers and ensuring that they meet the qualification stipulated in the EPA peer Review Handbook;
- Developing the charge to the peer reviewers;
- Providing peer review support to the reviewers, including literature searches and related document
- The contractor will maintain communication with the reviewers to ensure that the charge is clear and that the work is on schedule. In addition, the contractor will establish appropriate mechanisms to provide compensation to the reviewers.
- Providing logistical and facilitation support to the peer review workshop(s) or meeting(s); transcribing, compiling and distributing all post meeting comments, proceedings, and summaries, the cost of the workshop(s) or meeting(s) shall not exceed \$19,000; and
- Providing a final document to the EPA CL COR/WA COR including comments, alternatives, dissenting views, sources relied upon, and recommendations.

The contractor shall is also expected to schedule five (3) person-trips to update the WACOR and other EPA employees in Cincinnati on the progress of the task.

Deliverables:

1. Programmatic support in the area of sustainable materials management upon the technical direction of the WACOR

Task 2: Long-term performance of Subtitle D landfills

In 2002 the EPA published a report “Assessment and Recommendations for Improving the Performance of Waste Containment Systems” EPA/600/R-02/099. Building on this report, there is a need to generate similar type of data and field performance as it pertains to Subtitle D (municipal solid waste landfills). The contractor shall evaluate the field performance of engineered systems (e.g., liners and covers) for at least ten (10) Subtitle D landfills that are nearing the end 30 years post closure care time regulatory limit. The ten landfill sites will be identified with consultation with the WACOR. This task may involve the contractor traveling to these sites to collect data needed for the completion of the task. The contractor shall evaluate the available information on field performance of these landfills, collect and analyze liquid management data for Subtitle D landfills, Evaluate problems that have occurred in these systems and assess the adequacy of EPA HELP model as a predictor of head on the liner and the LandGEM model as a predictor of gas generation at these sites.

During option period 1, the contractor collected site specific data to evaluate the performance of landfill sites. Based on that data, the contractor shall develop a report evaluating the following aspects of solid waste landfill performance and its impact on water resources. Specifically, the report should include some of the following questions:

- 1) Engineered Systems
 - a) What is the nature, frequency and significance of identified problems in liner system?
 - i) Perimeter well monitoring
 - ii) Contaminants migration off site

- b) What conclusions can be drawn from available leachate collection system hydraulic efficiencies of liners?
- c) What is the nature, frequency and significance of identified problems in the final cover systems at these facilities?
 - i) Generic subtitle D prescribed covers
 - ii) Exposed geo-membrane covers
 - iii) Evapo-transpiration covers
 - iv) Others
- d) What is the nature, frequency and significance of identified problems in the gas collection and management system?
- 2) Leachate Generation and Collection:
 - a) Volume of leachate generated by closed Subtitle D landfills and the effects of site location (climatic region) and waste type on leachate generation rates?
 - b) What are the trends observed with leachate generation volume?
 - c) What is the leachate chemistry at these sites?
 - d) How the leachate generation rates using the EPA's HELP model compares to actual leachate generation rates at the site?
- 3) Landfill Gas Generation and Collection
 - a) Volume of gas generation by closed Subtitle D landfills and the effects of site location (climatic region) and waste type on gas generation rates?
 - b) What are the trends observed with gas generation volume?
 - c) What is the landfill gas composition at these sites?
 - d) How the gas generation using EPA's LandGEM model compares to actual gas generation rates at the site?
- 4) What are the financial cost of post closure care?
 - a) Cost of upkeep (regular maintenance)
 - b) Cost of sampling, data collection and management
 - c) Engineering support

Data for this report has been collected during option period 1. Thus the contractor is expected to make no more than two (1) person-trips for site visits. The contractor is also expected to schedule three (3) person-trips to update the WACOR and other EPA employees in Cincinnati on the progress of the task.

Deliverables:

Final Draft Report long-term performance of subtitle D landfills is due to the EPA 4 months after WA approval. Second draft report is due to EPA within 10 months of WA approval.

Task 3: Construction and Demolition Debris Summary

Construction and Demolition (C&D) debris is part of the municipal waste stream and is generated from the construction, renovation, repair, and demolition of structures such as residential and commercial buildings, roads, and bridges. The composition of C&D waste varies for these different activities and structures. Overall, C&D waste is composed mainly of wood products, asphalt, drywall, and masonry; other components often present in significant quantities include metals, plastics, earth, shingles, insulation, and paper and cardboard. It is often disposed of in unlined impoundments with little or no effluent collection system. This management process is becoming more and more unsustainable as effluent from these impoundments is causing groundwater and air contamination. Furthermore, this disposal process is proving to be a disincentive for generators to recycle these types of materials. The contractor shall develop a short report outlining EPA/ORD's research efforts into construction,

demolition debris.

The summary should cover the following EPA reports:

- EPA/600/R-13/303
- EPA/600/R-14/039
- EPA/600/R-14/375
- EPA/600/R-15/232
- EPA/600/R-15/111
- Yet to be published report on state of the practice for the recycling of construction and demolition debris
- Two minor internal documents

Deliverables:

A draft report “Materials Management Options for Construction and Demolition Debris” is due to the EPA 3 months after QA approval. Final report is due within 10 months of WA approval.

Task 4: Hydrologic Evaluation of Landfill Performance (HELP) Model

Over the past year, the government has successfully migrated the Hydrologic Evaluation of Landfill Performance Model (HELP) from Fortran 77 to VBA code. The contractor shall develop and enhanced user interface for the Excel-VBA based HELP model. Furthermore, the contractor shall develop a “User Guide” for the new model.

Deliverables:

An update interface and a “User Guide” for the HELP model.

V. SCHEDULE/DELIVERABLES

1. Work plan: In accordance with contract terms
2. QAPP(s): Three (3) weeks after TD work plan approval, edits, amendments will occur as the WA needs and requested by the WAOR
3. Progress reports: Delivered to WACOR monthly
4. Progress meetings: Conducted with the WACOR monthly
5. A draft report “Materials Management Options for Construction and Demolition Debris” is due to the EPA 3 months after QA approval. Final report is due within 10 months of WA approval.
6. Final Draft Report long-term performance of subtitle D landfills is due to the EPA 4 months after WA approval. Second draft report is due to EPA within 10 months of WA approval.
7. An updated interface for the HELP model within 10 months of WA approval
8. User Guide for the HELP model. Within 10 months of WA approval.
9. Programmatic support in the area of SMM upon the technical direction by the EPA WACOR

VI. REPORTING REQUIREMENTS

1. Monthly Progress Reports (including a progress evaluation discussion)
2. Monthly Financial Reports
3. Development and or update Project Specific PQAPP as needed for any of the tasks
4. Reports requested by the WACOR under task 1 of this WA

5. Draft Report “long-term performance of subtitle D landfills”
6. Final Report “Materials Management Options for Construction and Demolition Debris Management”

VII. GREEN MEETINGS AND CONFERENCES

The contractor shall follow the provision of EPA prescription 1523.703-1, *Acquisition of environmentally preferable meeting and conference services (May 2007)*, for the use of off-site commercial facilities for an EPA event, whether the event is a meeting, conference, training session, or other purpose.

Environmental preferability is defined at FAR 2.101, and shall be used when soliciting quotes or offers for meeting/conference services on behalf of the Agency.

VIII. CONFERENCES AND WORKSHOPS

The contractor shall immediately alert the WACOR to any anticipated event under the work assignment which may result in incurring an estimated \$20,000 or more cost, funded by EPA, specific to that event, meeting, training, etc. Those costs would include travel of both prime and consultant personnel, planning and facilitation costs, including all outlays for conference preparation, AV and rental of venue costs, etc. The EPA WACOR will then prepare for approval the internal paperwork for the event and will provide it to the CO. The CO will advise the contractor when appropriate signatures have been obtained. At that point, effort can proceed for the event. If the event is being sponsored by another EPA organization, the organization providing the planning is responsible for the approval.

Any event which meets the definition of a “conference,” with total net expenditures greater than \$20,000, is required to submit EPA Electronic Form 5170 and Form 5170-A (with cost estimates/actuals). In the case the workflow system is down and CORs require emergency approval, they can submit EPA Form 5170 (PDF) (2pp, 93K) (with cost estimates) to conference@epa.gov.

IX. SOFTWARE APPLICATION AND ACCESSIBILITY (SECTION 508 REHABILITATION ACT AND AMENDMENTS)

Software Application files, if delivered to the Government, shall conform to the requirements relating to accessibility as detailed to the 1998 amendments to the Rehabilitation Act, particularly, but not limited to, § 1194.21 Software applications and operating systems and § 1194.22 Web-based intranet and internet information and applications. See: <http://www.section508.gov/>

| | |
|--------------------------------|--|
| Preferred text format: | MS Word, 8.0 or higher (Office 2007 or higher) |
| Preferred presentation format: | Power Point, Office 2007 or higher |
| Preferred graphics format: | Each graphic is an individual GIF file |
| Preferred portable format: | Adobe Acrobat, version 6.0 |

The WACOR shall identify which of delivered products will require 508 compliance.

QUALITY ASSURANCE SURVEILLANCE PLAN for WSD’s Mission Support

Quality Assurance Surveillance Plan

The requirements contained in this WA are considered performance-based, focusing on the Agency's desired results and outcomes. The contractor shall be responsible for determining the most effective means by which these requirements will be fulfilled. In order to fulfill the requirements, the contractor shall design innovative processes and systems that can deliver the required services in a manner that will best meet the Agency's performance objectives. This performance-based requirement represents a challenge to the contractor to develop and apply innovative and efficient approaches for achieving results and meeting or exceeding the performance objectives, measures, and standards described below. The Contractor's performance will be reflected in the positive or negative evaluation offered by the Agency in the Contractor Performance Evaluation (CPE) which is evaluated annually (per the "Contractor Performance Evaluation" clause in the contract). The WACOR shall submit a complete annual review of the areas outlined in the Quality Assurance Surveillance Plan (QASP), included in the contract, which will then be utilized by the CL COR in preparing the overall evaluations submitted annually in response to the Contractor Performance Evaluation requirements in the contract.

| Performance Requirement | Measureable Performance Standards | Surveillance Method | Incentives/ Disincentives |
|---|---|---|--|
| <p>Management and Communications: The Contractor shall maintain contact with the EPA Contracting Officer (CO), Contract Level Contracting Officer's Representative (CL COR), and Work Assignment Contracting Officer's Representative (WACOR) throughout the performance of the contract and shall immediately bring potential problems to the attention of the EPA CL COR and appropriate WACOR. In cases where issues have a direct impact on project schedules, cost, time, or quality, the contractor shall provide options for EPA's consideration on resolving the issues or mitigating their impacts.</p> | Any issue adversely impacting project schedules, cost, time, or quality shall be brought to the attention of the EPA CL COR and appropriate WACOR within 3 work-days of occurrence. | 100% of active work assignments (WA) will be reviewed by the EPA WACORs (via the monthly progress report) to identify unreported issues. The EPA WACORs will report any issues to the EPA CL COR who will bring the issue(s) to the Contractor's attention through the CO. | <p>Two or more incidents per contract period of performance where the contractor does not meet the measureable performance standard will be considered unsatisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of Management.</p> <p>Fewer than two incidents per contract period of performance where the contractor does not meet the measureable performance standard will be considered satisfactory performance and will be reported as such in the CPARS Performance Evaluation System under the category of Management.</p> |
| <p>Cost Management and Control: The Contractor shall monitor, track, and accurately report level of effort, labor cost, other direct cost, and fee expenditures to EPA through progress reports and approved special reporting requirements. The Contractor shall assign an appropriate level of skilled personnel to all tasks, practice and encourage</p> | The contractor shall manage costs to the level of the approved cost estimate on each individual WA. The contractor shall notify the EPA WACOR, CL COR, and CO when 75% of the approved cost estimate for any particular WA is reached. If a contractor fails to manage and control cost, any resultant overrun cannot exceed the total contract obligation for that period. | 100% of the active WAs under the contract will be reviewed by the EPA CL COR and appropriate WACOR monthly (via meetings, monthly progress reports & milestones established for each deliverable) to compare actual versus projected expenditures. The EPA CL COR shall review the Contractor's monthly progress reports and request the WACOR's verification | <p>If the contractor does not meet the measurable performance standards in an applicable contract period of performance it will be assigned a rating of Unsatisfactory in CPARS under the category of Cost Control.</p> <p>A satisfactory rating will be reported in the CPARS Performance Evaluation System under the category of Cost Control if the contractor meets the</p> |

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| time management, and ensure accurate and appropriate cost control. | | of expenditures before authorizing invoice payments. | measureable performance standards and accurately reports the costs in the progress reports according to the requirements in the "Reports of Work" attachment to the RFP. |
| Timeliness: Services and deliverables shall be in accordance with schedules stated in each WA, unless amended or modified by an approved EPA action. | No more than 15% of all deliverables per WA shall be submitted more than 3 work days past the due date. | 100% of the active WAs/deliverables under the contract will be reviewed by the EPA CL COR/WACOR monthly (via monthly progress report & milestones established for each deliverable) to compare actual delivery dates against those approved. | If the contractor does not meet the measurable performance standards per WA during an applicable period of performance, it will be assigned a rating of Unsatisfactory in CPARS under the category of Schedule . A satisfactory rating will be reported in the CPARS Performance Evaluation System under the category of Schedule if the contractor meets the measureable performance standards. |
| Technical Effort: The Contractor shall abide by its QMP and QAPPs for individual WAs in performing services and providing the support on this contract. | No more than 15% of deliverables and work products for any WA furnished to EPA for review by CL COR/WACOR and QAO shall require revisions to meet the requirements of the QMP and QAPP for the WA. | 100% of active WAs/deliverables (and work products) will be reviewed by the EPA CL COR/WACOR to identify noncompliance issues with the QMP and QAPPs for individual WAs. | If the contractor does not meet the measurable performance standards per work assignment it will be assigned a rating of Unsatisfactory in CPARS under the category of Technical (Quality of Product) . A satisfactory rating will be reported in the CPARS Performance Evaluation System under the category of Technical (Quality of Product) if the contractor meets the measureable performance standards. |

